

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION

VLSI TECHNOLOGY LLC \*  
\*  
VS. \* CIVIL ACTION NO. W-21-CV-57  
\*  
INTEL CORPORATION \* March 1, 2021

BEFORE THE HONORABLE ALAN D ALBRIGHT, JUDGE PRESIDING  
JURY TRIAL PROCEEDINGS  
VOLUME 6 OF 7

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Proceedings recorded by mechanical stenography, transcript  
produced by computer-aided transcription.

08:04 1 (March 1, 2021, 8:04 a.m.)

08:04 2 THE COURT: Good morning. You may be seated.

08:06 3 Okay. Let's go ahead and proceed.

08:06 4 Mr. Chu, what would you like to take up this morning?

08:06 5 MR. CHU: Allocation of time.

08:06 6 THE COURT: Okay.

08:06 7 MR. CHU: At the very end of the day on Friday, we had

08:06 8 almost five hours left of the 15. We had 4 hours, 42 minutes.

08:07 9 And then Your Honor, after excusing the jury, said you want to

08:07 10 finish today. And the way you counted it, there would be a

08:07 11 total of four hours for both sides.

08:07 12 We had been efficient and stayed on budget, and we were

08:07 13 about one hour ahead of the other side. We thought that the

08:07 14 reasonable split is that we would have two and a half hours and

08:07 15 the other side would have one and a half. I don't think the

08:07 16 Court --

08:07 17 THE COURT: Mr. Chu, let me tell you what the problem is,

08:07 18 and I'm sympathetic to what you're saying. And I'm even

08:07 19 willing to do some 60/40 type allocation.

08:07 20 All I care about is, since I don't know what you're going

08:07 21 to put on in rebuttal, I don't want to find ourselves in a

08:07 22 situation where it's 2:30 and you say on rebuttal we rest or

08:08 23 we're done, and the defendant doesn't get an adequate amount of

08:08 24 time to deal with your rebuttal.

08:08 25 So I'm open to you -- and Mr. Lee I'll hear from of

08:08 1 course, but I'm open to a slight -- plaintiff gets 60 to 40  
08:08 2 because of that, but I'm going to make sure that -- what is  
08:08 3 your suggestion to guarantee that Intel has sufficient time to  
08:08 4 cross-examine any witnesses you do on rebuttal?

08:08 5 MR. CHU: So here's the total time, from 8:30 to 2:30 is  
08:08 6 six hours, two and a half in the afternoon, three and a half in  
08:08 7 the morning. Subtract an hour for lunch, that's five hours.  
08:08 8 Subtract 15 minutes for one break in the morning, that's 4:45.

08:08 9 THE COURT: Okay.

08:08 10 MR. CHU: If you say the total time for both sides split  
08:09 11 in a way that you think is fair and we are held to that, so  
08:09 12 whether it's 60/40 or two and a half hours, one and a half  
08:09 13 hours, we are held to our allocated time, then we will finish  
08:09 14 with plenty of time before 2:30. And I think that's the way to  
08:09 15 govern it.

08:09 16 THE COURT: Mr. Lee?

08:09 17 MR. LEE: Your Honor, we thought that the proposal you  
08:09 18 made yesterday, or at least Evan communicated to us, was very  
08:09 19 fair. It gives us time to finish our case, and then they can  
08:09 20 start their rebuttal case.

08:09 21 We had a disagreement about what should come in, but we  
08:09 22 understand Your Honor's ruling, and particularly if it's going  
08:09 23 to be that broad, the time constraint makes sense. And the  
08:09 24 50/50 split once they start rebuttal makes sense to us.

08:09 25 We have to finish Dr. Grunwald. We have Mr. Huston,

08:09 1 who'll be about an hour and ten on direct, and then we will  
08:10 2 rest at that point in time.

08:10 3 THE COURT: Start over. Let me just write -- I need to  
08:10 4 write down -- write down the math. And -- well, let me start  
08:10 5 over and say this: What I was trying to do yesterday was  
08:10 6 give -- to balance these -- these are the competing interests,  
08:10 7 I want to put on the record.

08:10 8 Competing interests are this: I know I'm shortchanging  
08:10 9 you from what we originally had, the total number of hours. I  
08:10 10 get that. In part I'm doing that, Mr. Lee, to accommodate your  
08:10 11 ability to get out of here because of the conflict of that. So  
08:10 12 mindful of that -- but I also do, if we can, I would like to  
08:10 13 get finished today just because it's been a long trial. So I  
08:10 14 have that factor.

08:10 15 I am aware of the fact that Intel has used slightly more  
08:10 16 time. It's an hour, but it's more time than the plaintiff has  
08:10 17 used. I wanted to make sure that -- I wanted to give you  
08:11 18 enough warning that from the -- in this case the plaintiff's  
08:11 19 perspective, as they were doing crosses of your witnesses  
08:11 20 today, that they were saving sufficient time to, if they wanted  
08:11 21 to put on rebuttal case, put on a rebuttal case.

08:11 22 So I am also, though -- you know, I'm not totally against  
08:11 23 if we need to do this to allow the plaintiff to get in what  
08:11 24 they want to get in and to make sure Intel has an opportunity  
08:11 25 to do a cross, which I'm trying to balance, trying to get all

08:11 1 the planes in on time, I would be -- I would even consider  
08:11 2 going until 3:00 -- read my deal, which I think is like --  
08:11 3 it's a long -- my concern is it's long. It's 40 pages, I  
08:11 4 think, and I tend to read about a minute a page. So I've  
08:12 5 allocated -- whatever number of pages the charge is, you'll see  
08:12 6 for me it winds up being about that many minutes.

08:12 7 I'm also though totally happy to go to 6:00 today to  
08:12 8 finish the trial and give everyone enough time to do what you  
08:12 9 need to get done.

08:12 10 So I'm also perfectly happy, for example, another  
08:12 11 suggestion I might have is that I give Mr. Chu a cut-off of  
08:12 12 2:30 to get his -- to do whatever they're going to do on their  
08:12 13 rebuttal case, which would save 30 minutes for defendant on  
08:12 14 that final witness to finish, and then we would start at 3:00.

08:12 15 I'm just trying to make this as fair as I can and let you  
08:12 16 all get in your evidence and finish today.

08:12 17 MR. LEE: Your Honor, they actually have two witnesses on  
08:12 18 rebuttal.

08:12 19 THE COURT: No. I get that. I understand. I'm saying  
08:12 20 I'm trying to get -- make sure everyone gets to put on their  
08:13 21 evidence and do their cross.

08:13 22 MR. LEE: Can I make a suggestion that may help?

08:13 23 THE COURT: Absolutely.

08:13 24 MR. LEE: I mean, we have to finish with Dr. Grunwald this  
08:13 25 morning, then we have Mr. Huston and then we'll rest. Is it

08:13 1 possible that what we do is come back to Your Honor at that  
08:13 2 point, Mr. Chu and I, at a break and just say here's how much  
08:13 3 time's left, then you tell us how to split it?

08:13 4 THE COURT: That's absolutely fine with me. I'll have  
08:13 5 more information then. I just didn't want the plaintiff -- I  
08:13 6 wanted the plaintiff -- the plaintiff needs to know they need  
08:13 7 to be reasonable in terms of their cross.

08:13 8 And what I may also do -- now you know -- I'll say this  
08:13 9 going in, I am a big let the lawyers do what they want to do.  
08:13 10 It's your time.

08:13 11 But I think what I'm going to do for the witnesses -- I  
08:13 12 don't want this to seem unfair, but I'm letting you know now --  
08:13 13 you get a direct, you get a cross, you get a redirect, and you  
08:13 14 get a recross and then we're done with that witness as opposed  
08:13 15 to what I have been doing, which is let you all go on because  
08:13 16 it was your time.

08:13 17 So keep that in mind as well, that you're only going to  
08:14 18 get one second chance to put someone on.

08:14 19 MR. LEE: And, Your Honor, there are some issues with  
08:14 20 Mr. Chandler, who's one of the two, and what he can testify to.  
08:14 21 Your Honor may recall, we had a Daubert on him, which you  
08:14 22 granted in part. That actually may cut the time down too,  
08:14 23 because there are at least three major issues, which we could  
08:14 24 address whenever Your Honor wants.

08:14 25 THE COURT: Well, let's do it now.

08:14 1 MR. LEE: Okay. Mr. Mueller's going to address them for  
08:14 2 us.

08:14 3 MR. CHU: Could I --

08:14 4 THE COURT: Mr. Chu, you can say anything you'd like.

08:14 5 MR. CHU: We would be far more comfortable if Your Honor  
08:14 6 would just make a call and allocate of the four hours, because  
08:14 7 we should be done by 2:30 if the total for both sides is four  
08:14 8 hours. And we can plan for that, and we'll live within those  
08:14 9 time limits.

08:14 10 The proposal that Your Honor had suggested on Sunday would  
08:14 11 allow them to run out the clock.

08:14 12 THE COURT: Okay. Mr. Chu, I agree with that too. It's  
08:14 13 like Justice Breyer once said to both sides -- Mr. Lee might  
08:15 14 have been the lawyer he said it to -- but he said, you know,  
08:15 15 the really hard thing is I listen to you, and I think you're  
08:15 16 right; I listen to him, I think he's right, and what do I do?

08:15 17 I'm going to give the plaintiff two and a half hours. I'm  
08:15 18 going to give the defendant two hours, and we're going to  
08:15 19 finish by 3 o'clock.

08:15 20 MR. CHU: Thank you. And we can go to that issue. We  
08:15 21 have a couple of issues too. I can bring up one issue very  
08:15 22 quickly.

08:15 23 THE COURT: And you all have 15 minutes to get everything,  
08:15 24 you know, done.

08:15 25 MR. CHU: Last week we had proposed playing some Delaware

08:15 1 depositions on willful blindness. Several witnesses, who were  
08:15 2 Intel engineers, said Intel has a policy that we're not allowed  
08:15 3 to look at patents.

08:15 4 And then Your Honor said, were these 30(b)(6) depositions?  
08:15 5 Mr. Lee got up instantly and said, no, they're not 30(b)(6)  
08:16 6 depositions.

08:16 7 And from the transcript, Your Honor had said, well, if  
08:16 8 they're 30(b)(6) depositions, it seemed like you were going to  
08:16 9 allow them; but if they're not 30(b)(6) depositions, you ruled  
08:16 10 that they were out. They are 30(b)(6) depositions.

08:16 11 THE COURT: Mr. Lee?

08:16 12 MR. LEE: Your Honor, they were not 30(b)(6) depositions  
08:16 13 on this topic. These were engineers who were 30(b)(6)s on  
08:16 14 technical issues but not on this topic.

08:16 15 THE COURT: Let me make clear on the record. I'm only --  
08:16 16 I would only allow it in if Intel had offered -- if the  
08:16 17 question was: Put up someone from Intel as a 30(b)(6) witness  
08:16 18 to describe the policy, you know, with respect to -- I mean, it  
08:16 19 needs to be on this topic, not just that Witness X was there to  
08:16 20 tell you how the widget worked as the corporate representative  
08:16 21 and you asked them this and he also said that during the depo.

08:16 22 MR. HATTENBACH: Your Honor, the topics that they were  
08:16 23 designated by Intel for included the subject matter on which we  
08:16 24 wanted to play the deposition testimony.

08:17 25 So as an example, all facts relating to Intel's decision

08:17 1 to develop the accused features, including the considerations  
08:17 2 that factored into those decisions, all facts and circumstances  
08:17 3 relating to non-infringing alternatives.

08:17 4 Those sorts of things we believe firmly encompass  
08:17 5 corporate policy that forbade affirmatively them from even  
08:17 6 looking at patents as part of that decision-making process.

08:17 7 And it was represented to you explicitly that they were  
08:17 8 not 30(b) (6) witnesses, not that they weren't 30(b) (6)  
08:17 9 witnesses on a particular topic. And that was just incorrect.

08:17 10 THE COURT: Mr. Lee?

08:17 11 MR. LEE: Your Honor, they were not 30(b) (6)s on the  
08:17 12 question of this patent policy. That's correct. It remains  
08:17 13 correct. They have not cited to you in their papers a single  
08:17 14 reference.

08:17 15 The other thing is this is way too late in the day.

08:17 16 THE COURT: No. I -- I'm going to exclude those  
08:17 17 witnesses.

08:17 18 What's the next issue?

08:18 19 Or I'm not going to allow -- I'm not going to exclude  
08:18 20 them. I'm not going to permit them to testify.

08:18 21 Next topic?

08:18 22 MR. MUELLER: Yes, Your Honor. We had the issue Mr. Lee  
08:18 23 referenced with respect to Mr. Chandler who's one of the two  
08:18 24 witnesses testifying today. So we do have one discrete issue  
08:18 25 with Mr. Huston, who will testify this morning. And

08:18 1 Mr. Chandler wouldn't testify till the afternoon. So I think  
08:18 2 it would be more efficient to just address --

08:18 3 THE COURT: I'm going to do both of them right now.

08:18 4 MR. MUELLER: Okay.

08:18 5 THE COURT: So Mr. Mueller jumped up before you did, so  
08:18 6 I'm going to let him.

08:18 7 MR. MUELLER: May I pass this up, Your Honor?

08:18 8 THE COURT: Yes. Of course.

08:18 9 MR. MUELLER: Judge, you recall that at Daubert you  
08:18 10 excluded a portion of Mr. Chandler's opinions related to  
08:18 11 holdout and expressions with respect to the character of Intel  
08:18 12 and so on.

08:18 13 The slides that you have before you, Your Honor, we think  
08:18 14 contravene that decision. And I'll direct your attention, if I  
08:18 15 could, Your Honor, to Slide 6. --

08:18 16 THE COURT: Are these the closing argument slides?

08:19 17 MR. MUELLER: No. These are for Mr. Chandler. These are  
08:19 18 for Mr. Chandler.

08:19 19 THE COURT: Okay.

08:19 20 MR. MUELLER: 6.19, there's a fork in the road you can  
08:19 21 see. And the clear implication is that Intel is forcing the  
08:19 22 patent owner to risk long and expensive litigation or take less  
08:19 23 money than patents are worth. This is another way of  
08:19 24 expressing the holdout arguments.

08:19 25 THE COURT: You know, I'm not going to allow that slide.

08:19 1 MR. MUELLER: The second problem we have, Your Honor, with  
08:19 2 Mr. Chandler's slides, and also the exhibits that we have  
08:19 3 received in connection with Mr. Chandler, if you turn to the --  
08:19 4 6.21, Your Honor.

08:19 5 THE COURT: Oh, and -- and by the way, it would be the --  
08:19 6 there's a next slide as well that has an X on it. I would not  
08:19 7 permit that one either.

08:19 8 MR. MUELLER: Thank you, Your Honor.

08:19 9 If you look at, Your Honor, Slide 6.21, there's -- this is  
08:19 10 one example of slides referring to various settlement  
08:19 11 agreements.

08:19 12 We've received disclosures of settlement agreements  
08:19 13 ranging from an antitrust case to various patent cases, and we  
08:20 14 think there's at least three distinct grounds on which these  
08:20 15 agreements should be precluded.

08:20 16 No. 1, Mr. Chandler is not saying that any of these are  
08:20 17 comparable license agreements. Quite the contrary. He's  
08:20 18 explicitly saying that they're not comparable.

08:20 19 Now, he says that they are, quote, "informative." And so  
08:20 20 what we take this to mean is he's going to try to show the jury  
08:20 21 these large numbers from settlement agreements, despite  
08:20 22 explicitly acknowledging that they're not comparable to the  
08:20 23 hypothetical negotiation.

08:20 24 THE COURT: You can -- I -- I've given Intel great liberty  
08:20 25 in what they've done in the other direction. I'm going to

08:20 1 allow -- you can certainly point that on cross.

08:20 2 MR. MUELLER: Okay. And the last thing, Your Honor, is  
08:20 3 there's some slides that refer to --

08:20 4 THE COURT: So let me protect the record. I'm overruling  
08:20 5 your objection. I will allow VLSI to use that slide.

08:20 6 MR. MUELLER: Understood, Your Honor.

08:20 7 The last issue is -- may I just address, Your Honor, if I  
08:20 8 could just lodge a running objection -- rather than getting up  
08:20 9 and objecting over and over again -- but a running objection to  
08:20 10 those agreements?

08:21 11 THE COURT: You will need to object when -- on the record  
08:21 12 at least once. You don't have -- you can just say, however you  
08:21 13 want to say it, "Your Honor, I -- you know, I raise the  
08:21 14 objection I raised this morning." And I'll put that on the  
08:21 15 record. I want to make sure -- I'm just trying to make sure I  
08:21 16 protect your record. And then, yes, you may have your running  
08:21 17 objection.

08:21 18 MR. MUELLER: Thank you, Your Honor. I appreciate that.

08:21 19 The last thing is there's a couple of slides here that  
08:21 20 refer to Dr. Sullivan's opinions. And we think this is an  
08:21 21 attempt to have Mr. Chandler corroborate Dr. Sullivan's  
08:21 22 opinions, including with -- in respects in which Mr. Chandler  
08:21 23 himself did not offer opinions.

08:21 24 And so an example of this would be No. 13 -- 6.13,  
08:21 25 hypothetical negotiation versus real-world negotiations. He's

08:21 1 referring to this information gap. These are issues that came  
08:21 2 up in the context of Dr. Sullivan that Dr. Chandler -- or  
08:21 3 Mr. Chandler did not opine on. We just ask that he be held to  
08:21 4 his opinions.

08:21 5 THE COURT: Well, here's what I'm going to order, and I  
08:22 6 have no way of knowing how you all do this. I'm not going to  
08:22 7 allow VLSI to represent to Mr. Chandler an opinion was made if  
08:22 8 it wasn't made. If it wasn't made, then they can't represent  
08:22 9 that.

08:22 10 I don't know what they're going to say. If you -- if when  
08:22 11 they say, Dr. Sullivan said this, you can object and the  
08:22 12 plaintiff should have some way of being able to show me in the  
08:22 13 record or something where he did say it, or it was in his  
08:22 14 report or whatever it is.

08:22 15 Anything they are -- but they are -- VLSI is certainly  
08:22 16 able to cross on anything that they can establish that the jury  
08:23 17 did hear from Dr. Sullivan.

08:23 18 MR. MUELLER: Understood, Your Honor.

08:23 19 So just to make sure I understand Your Honor's rulings on  
08:23 20 the other issues, they can refer to the settlement agreements  
08:23 21 but cannot make any of these holdout arguments.

08:23 22 THE COURT: They cannot make any argument that is  
08:23 23 somewhat -- here's what I care about. They cannot say that  
08:23 24 Intel -- the expense of litigation was a factor in the decision  
08:23 25 making here.

08:23 1 MR. MUELLER: Okay. Thank you, Your Honor. I appreciate  
08:23 2 it.

08:23 3 THE COURT: And that's -- that, I do not think is  
08:23 4 appropriate. Under -- again, with always being -- saying if  
08:23 5 somehow you open the door, you know, and they can show me that  
08:23 6 this gentleman says something where it becomes fair to raise  
08:23 7 that because of something he said, if they -- and let me add  
08:23 8 one more thing.

08:23 9 I don't believe that anyone gets to, on cross, open a  
08:23 10 door. And what I mean by this in this situation is VLSI  
08:23 11 doesn't get to ask a question of Mr. Chandler, he answers it,  
08:24 12 and then he says, oh, he's opened the door.

08:24 13 No. In my opinion, he just answered your question that  
08:24 14 you decided to put to him. You can't open the door for -- to  
08:24 15 bring in something when you're on your feet.

08:24 16 MR. MUELLER: Okay.

08:24 17 THE COURT: But if -- as far as I'm concerned, that -- the  
08:24 18 idea of avoiding litigation costs is not an appropriate subject  
08:24 19 for the jury to consider.

08:24 20 MR. MUELLER: Thank you, Your Honor.

08:24 21 THE COURT: Yes, sir.

08:24 22 MR. HEINRICH: Good morning, Your Honor.

08:24 23 THE COURT: Good morning.

08:24 24 MR. HEINRICH: So we have just one objection to one  
08:24 25 discrete demonstrative from Mr. Huston.

08:24 1 THE COURT: Okay.

08:24 2 MR. HEINRICH: And let's see. Well, my --

08:24 3 THE COURT: Is it that it's too big?

08:24 4 MR. HEINRICH: Well, no. My ELMO skills are not great.

08:24 5 So this is --

08:24 6 THE COURT: You can try just handing it to me.

08:24 7 MR. HEINRICH: This is Mr. Huston's final demonstrative.

08:24 8 And it's just factually and legally inappropriate. He's trying

08:25 9 to suggest that the asserted patents are this motel and you can

08:25 10 license or rent this room.

08:25 11 THE COURT: Go ahead.

08:25 12 MR. HEINRICH: He's trying to suggest that the patents are

08:25 13 this motel, you can rent -- take a license --

08:25 14 THE COURT: You know, I -- I, actually, in a case, had

08:25 15 someone do exactly this on the other side to me, and I dealt

08:25 16 with it pretty well on cross.

08:25 17 MR. HEINRICH: Okay.

08:25 18 THE COURT: And so -- so I'm assuming that the quality of

08:25 19 lawyers on your side, you can -- you can deal with this. If I

08:25 20 could, every lawyer in front of me is way better than I was as

08:25 21 a trial lawyer. I'm sure you can -- you can handle it.

08:25 22 MR. HEINRICH: Okay. Thank you, Your Honor.

08:25 23 THE COURT: I'll overrule your objection.

08:25 24 Is there anything else we need to take up?

08:25 25 MR. LEE: Not for Intel, Your Honor.

08:25 1 THE COURT: Mr. Chu?

08:25 2 MR. CHU: Not this morning.

08:25 3 THE COURT: Is that a warning?

08:25 4 MR. CHU: No, no, no. I know that we collectively, and

08:25 5 the Court in particular, wants the jury --

08:26 6 THE COURT: We do. So I'm going to go, and if you'll get

08:26 7 the jury in, we will bring the jury in just as soon as we can

08:26 8 get them over here.

08:26 9 THE BAILIFF: All rise.

08:26 10 (Recess taken from 8:26 to 8:28.)

08:28 11 THE BAILIFF: All rise.

08:28 12 THE COURT: Please remain standing for the jury.

08:28 13 (The jury entered the courtroom at 8:28.)

08:29 14 THE COURT: Thank you. You may be seated.

08:29 15 MR. CHU: May I begin?

08:29 16 THE COURT: Yes, sir.

08:29 17 MR. CHU: Thank you very much, Your Honor.

08:29 18 Good morning, ladies and gentlemen.

08:29 19 CROSS-EXAMINATION

08:29 20 BY MR. CHU:

08:29 21 Q. Good morning, Dr. Grunwald.

08:29 22 A. Good morning.

08:29 23 Q. I'd like to call up Page 165 of your expert report

08:29 24 and show the jury a figure. And at the bottom -- I'm going to

08:29 25 blow that up -- and in particular, you expressed an opinion in

08:29 1 the box that is called the "GV3 controller & VID Stepper"; is  
08:30 2 that right?

08:30 3 A. Yes.

08:30 4 Q. I'm going to be asking you a question just about that  
08:30 5 box because you were pointing to that as a matter of your  
08:30 6 opinion.

08:30 7 A. Yes.

08:30 8 Q. When your deposition was taken, you were asked  
08:30 9 questions about it. And is the following correct: That does  
08:30 10 not have a computer program having instructions; is that  
08:30 11 correct? Yes or no.

08:30 12 A. The GV3 stepper, I think I -- that's correct. Yes.

08:30 13 Q. Thank you. I'm going to a different subject now.  
08:30 14 You would agree that it's very important to follow the  
08:30 15 correct legal principles in forming your opinion; is that  
08:30 16 correct?

08:30 17 A. Yes.

08:30 18 Q. When you started on your analysis for your expert  
08:31 19 report on validity of the '759 patent, you did not assume  
08:31 20 validity or invalidity -- let me ask it again.

08:31 21 When you started your analysis for your expert report on  
08:31 22 validity of the '759 patent, you did not presume validity or  
08:31 23 invalidity; is that correct? Yes or no.

08:31 24 A. I assumed that the patent --

08:31 25 Q. Sir, can you answer the question yes or no?

08:31 1 A. I don't think I can answer it just yes or no.

08:31 2 Q. You did not presume validity or invalidity of the  
08:31 3 '759 patent when you were working on your expert report; is  
08:32 4 that correct? Yes or no.

08:32 5 A. I don't think I can answer that fully with a -- with  
08:32 6 just a yes or no, if I'm understanding the question correctly.

08:32 7 Q. I'm going to go to another subject, sir.

08:32 8 Dr. Conte offered an opinion about the closest  
08:32 9 non-infringing alternative; is that correct?

08:32 10 A. Yes.

08:32 11 Q. You criticized him, correct? Can you answer that yes  
08:32 12 or no?

08:32 13 A. Yes.

08:32 14 Q. Yes, you did criticize Dr. Conte on his opinion about  
08:32 15 the closest non-infringing alternative; is that correct?

08:32 16 A. Yes. That's correct.

08:32 17 Q. You did not offer your own opinion on the closest  
08:33 18 non-infringing alternative; is that correct? Yes or no.

08:33 19 A. Yes. It's correct.

08:33 20 Q. Dr. Conte also testified about comparison testing,  
08:33 21 correct?

08:33 22 A. Yes. I think so.

08:33 23 Q. And what he was comparing was HWP autonomous, which  
08:33 24 for shorthand we also called Speed Shift; is that correct?

08:33 25 A. Yes.

08:33 1 Q. That was part of it?

08:33 2 A. Yes.

08:33 3 Q. And he was comparing that to the legacy speed  
08:33 4 changes, correct?

08:33 5 A. The -- yes.

08:33 6 Q. And you criticized Dr. Conte's comparison of Speed  
08:34 7 Shift with legacy speed changes, correct?

08:34 8 A. Yes.

08:34 9 Q. Professor Conte's comparison was based on tests that  
08:34 10 Intel had done on the exact same comparison, correct?

08:34 11 A. Yes. The tests were labeled that. Yes.

08:34 12 Q. In your criticism you said that Professor Conte,  
08:34 13 instead of comparing Speed Shift to legacy, was that he should  
08:34 14 have compared it to what you called "true legacy," correct?

08:34 15 A. Yes.

08:34 16 Q. You did not do that comparison between Speed Shift  
08:35 17 and what you called true legacy; is that correct?

08:35 18 A. That's correct.

08:35 19 Q. You never bothered to ask anyone to run that test for  
08:35 20 you; is that correct?

08:35 21 A. Yes. That's correct.

08:35 22 Q. You knew that Intel has a very substantial  
08:35 23 performance testing group; is that correct?

08:35 24 A. Yes. That's right.

08:35 25 Q. You also had contact with Dr. Rotem, who we heard

08:35 1 from last week, correct?

08:35 2 A. Yes. I spoke to him twice.

08:35 3 Q. And you also had contact with Dan Borkowski, who we  
08:35 4 heard from last week; is that correct?

08:35 5 A. Yes. I think I spoke to him twice too.

08:35 6 Q. And you could have asked Dr. Rotem to do the test but  
08:35 7 you did not do so, correct?

08:35 8 A. That's correct.

08:35 9 Q. You could have asked Dan Borkowski to do the test,  
08:35 10 but you did not do so, correct?

08:35 11 A. Yes. I did not ask him.

08:35 12 Q. You could have asked a small fraction of the large  
08:36 13 Intel performance testing group to do the test, but you did not  
08:36 14 do so; is that correct?

08:36 15 A. Yes. That's correct.

08:36 16 Q. Thank you very much, Doctor.

08:36 17 THE COURT: Mr. Chu?

08:36 18 MR. CHU: Just for the record, the first figure I  
08:36 19 mentioned is from Exhibit D-267 at 11.

08:36 20 THE COURT: Thank you, sir.

08:36 21 MR. CHU: Thank you, Doctor.

22 THE COURT: Redirect?

23 MS. SOOTER: Thank you, Your Honor.

24 If we could go to Slide 71 of Professor Grunwald's slide  
25 deck, please.

## 1 REDIRECT EXAMINATION

2 BY MS. SOOTER:

08:37 3 Q. Professor Grunwald, you were just asked about the GV3  
08:37 4 stepper at the bottom of this figure that you see here. Do you  
08:37 5 remember that?

08:37 6 A. Yes.

08:37 7 Q. Can you please explain to us whether or not that is  
08:37 8 what you're pointing to as the programmable clock controller in  
08:37 9 Yonah?

08:37 10 A. No. That's not the only part of the programmable  
08:37 11 clock controller.

08:37 12 Q. What are you pointing to as a programmable clock  
08:37 13 controller in Yonah?

08:37 14 A. So it combines all of the things shown on this slide  
08:37 15 plus microcode that is used to provide results to this slide,  
08:37 16 plus microcode that manipulates the GV3 stepper, which I think  
08:37 17 is what the next slide describes.

08:37 18 Q. So we would have to look at more than just that to  
08:37 19 see the programmable clock controller?

08:37 20 A. Yes.

08:37 21 Q. Professor Grunwald, you were just asked a number of  
08:37 22 questions about the testing of Speed Shift as compared to  
08:37 23 SpeedStep. Do you remember that?

08:38 24 A. Yes.

08:38 25 Q. Is it possible to measure the value of the '759

08:38 1 patent by looking at Intel's products?

08:38 2 A. No. Because even in the alleged products, the legacy  
08:38 3 mode is actually implemented by the same hardware. And the --  
08:38 4 so it would be using that same hardware to test sort of two  
08:38 5 different modes of operation.

08:38 6 Q. Now, I believe that, regarding this testing that you  
08:38 7 were just asked about, you testified earlier that the  
08:38 8 plaintiff's expert, Dr. Annavaram, used the wrong tool. Can  
08:38 9 you please remind us what you meant by that?

08:38 10 A. Dr. Annavaram used the Fox2 Power Model tool. So  
08:38 11 that -- or I'm sorry, not power model, power debugging tool.  
08:38 12 So it's used to determine whether the P-code --

08:38 13 MR. CHU: Excuse me, Doctor. And I apologize, counsel.  
08:38 14 This is beyond the scope of cross.

08:39 15 THE COURT: I believe the question was when you asked him  
08:39 16 about something, wasn't it?

08:39 17 MS. SOOTER: Yes, Your Honor.

08:39 18 THE COURT: Then --

08:39 19 MR. CHU: I did not ask questions about Dr. Annavaram's  
08:39 20 testing or the Fox2 tool. I asked questions about work that  
08:39 21 Professor Conte did.

08:39 22 THE COURT: Could you ask the question again?

08:39 23 MS. SOOTER: Sure. I'll ask the question.

08:39 24 BY MS. SOOTER:

08:39 25 Q. Professor Grunwald, would it have made sense for you

08:39 1 to go to Intel to ask them to run the Fox2 tests?

08:39 2 A. No.

08:39 3 Q. Why not?

08:39 4 A. Wrong tool for the wrong job, I think was the phrase  
08:39 5 I used earlier.

08:39 6 Q. What do you mean by that?

08:39 7 A. The Fox2 tool is not used for measuring power or  
08:39 8 performance. It's for debugging code.

08:39 9 Q. Do you remember that Mr. Chu asked you some questions  
08:39 10 on Friday afternoon about what the Patent Office knew when it  
08:40 11 decided to grant the '759 patent?

08:40 12 A. Yes.

08:40 13 Q. And specifically Mr. Chu asked you about something  
08:40 14 called SpeedStep. Do you remember that?

08:40 15 A. Yes. I do.

08:40 16 Q. Let's look at the document Mr. Chu showed you.

08:40 17 MS. SOOTER: If we could bring up PTX-8-A, please.

08:40 18 BY MS. SOOTER:

08:40 19 Q. This is the prosecution history for the '759 patent,  
08:40 20 and I'd like to turn to the page Mr. Chu showed you.

08:40 21 MS. SOOTER: Page 68, please.

08:40 22 BY MS. SOOTER:

08:40 23 Q. Now, do you remember Mr. Chu asking you questions  
08:40 24 about this article?

08:40 25 A. Yes.

08:40 1 Q. Which processors is this article about?

08:40 2 A. It's about, as it says, the Mobile Intel Pentium III

08:40 3 Processor Family. Those are a unit processor or a single-core

08:40 4 family.

08:40 5 Q. Thank you.

08:40 6 And why is that significant, that there is a single core

08:40 7 on these processors?

08:40 8 A. Because a central part of the '759 patent is that it

08:41 9 deals with multiple master devices.

08:41 10 Q. And what does VLSI map to a master device?

08:41 11 A. A core.

08:41 12 Q. And so which Intel product was the first client

08:41 13 product to have two cores?

08:41 14 A. The Intel Yonah processor.

08:41 15 Q. Did the Patent Office know about Yonah when it

08:41 16 decided to grant the '759 patent?

08:41 17 A. No. They did not.

08:41 18 Q. Was that significant to its analysis?

08:41 19 MR. CHU: Objection. Lack of foundation. Calls for

08:41 20 speculation as to what an examiner had in his mind.

08:41 21 THE COURT: I will -- the way it was phrased, I'll sustain

08:41 22 it, but you can certainly re-ask.

08:41 23 BY MS. SOOTER:

08:41 24 Q. Professor Grunwald, did the Patent Office have before

08:41 25 it, when it was deciding whether or not to grant the '759

08:41 1 patent, a processor with two cores that ran SpeedStep?

08:41 2 A. No.

08:41 3 Q. Is that significant to the language of the claims  
08:42 4 that we're talking about in this case?

08:42 5 A. Yes.

08:42 6 Q. Professor Grunwald, you were asked a lot of questions  
08:42 7 on Friday afternoon about things that might happen in a  
08:42 8 restaurant. Do you remember that?

08:42 9 A. Yes.

08:42 10 Q. And Mr. Chu asked you about whether things that  
08:42 11 happened in restaurants might be considered requests, right?

08:42 12 A. Yes.

08:42 13 Q. And during that discussion about restaurants, do you  
08:42 14 remember whether Mr. Chu showed you the actual claims of the  
08:42 15 '759 patent?

08:42 16 A. I don't remember.

08:42 17 MS. SOOTER: Can we bring up Professor Grunwald's slide  
08:42 18 DDX-10.34, please?

08:42 19 BY MS. SOOTER:

08:42 20 Q. Professor Grunwald, what do we see here?

08:42 21 A. These are Claims 14 and 18.

08:42 22 Q. Now, what do the claims require -- let me ask you  
08:42 23 this: What part of the system must send or provide the  
08:43 24 requests?

08:43 25 A. The first master device.

08:43 1 Q. And what part of the system must receive the  
08:43 2 requests?

08:43 3 A. The clock controller.

08:43 4 Q. And what must the requests be requesting?

08:43 5 A. The first master device configured to provide a  
08:43 6 request to change a clock frequency of a high-speed clock.

08:43 7 Q. Now, notwithstanding all of the questions about  
08:43 8 restaurants, do Intel's products have the claims that are  
08:43 9 required -- I'm sorry -- the requests that are required by the  
08:43 10 '759 patent?

08:43 11 A. No. They don't.

08:43 12 Q. Can you remind us what -- remind the jury, please,  
08:43 13 how Intel's Lake processors adjust clock speeds instead of  
08:43 14 using requests?

08:43 15 A. In the diagram and in the Intel document it's called  
08:43 16 telemetry. It uses these autonomous algorithms that take in  
08:43 17 telemetry information and then make requests -- or sorry --  
08:43 18 changes.

08:43 19 Q. And again, what do you mean by "autonomous  
08:44 20 algorithms"?

08:44 21 A. The algorithms that Dr. Rotem and his group developed  
08:44 22 that run on the PCU. So they're software that's running on the  
08:44 23 PCU.

08:44 24 Q. And do the accused products use requests or  
08:44 25 autonomous algorithms?

08:44 1 A. They use autonomous algorithms.

08:44 2 Q. And did anything Mr. Chu asked you on Friday change

08:44 3 your noninfringement opinions in this case?

08:44 4 A. No.

08:44 5 Q. Now, Mr. Chu asked you a number of questions about

08:44 6 Dr. Rotem's testimony on Friday as well. Do you remember that?

08:44 7 A. Yes.

08:44 8 Q. And Mr. Chu asked you about two lines on Page 250 of

08:44 9 a 365-page transcript. Do you remember that?

08:44 10 A. Yes.

08:44 11 Q. Now, Mr. Chu didn't show you any other testimony

08:44 12 offered by Dr. Rotem, did he?

08:44 13 A. No.

08:44 14 Q. And he didn't provide you any context for those lines

08:45 15 of testimony, did he?

08:45 16 A. That's correct.

08:45 17 Q. Were you here when Dr. Rotem testified on Friday?

08:45 18 A. Yes. I was.

08:45 19 Q. Do you recall that Dr. Rotem was asked about those

08:45 20 same two lines of his deposition testimony on Friday here?

08:45 21 A. Yes. I was.

08:45 22 Q. And Dr. Rotem -- do you recall whether Dr. Rotem

08:45 23 answered questions about that deposition testimony?

08:45 24 A. Yes. He did.

08:45 25 MS. SOOTER: I'd like to bring up the trial transcript

08:45 1 starting at Page 1199, Line 22, please.

08:45 2 MR. CHU: Objection, Your Honor. I think it's improper in  
08:45 3 the context of the fact that there's testimony that is in the  
08:45 4 trial record. It is already in the trial record and ought not  
08:45 5 to be used simply to republish that same testimony with another  
08:45 6 witness. It's 403 at least. And it's argumentative.

08:45 7 THE COURT: Overruled.

08:45 8 MS. SOOTER: So starting at --

08:46 9 THE COURT: What I would prefer is for you to read it into  
08:46 10 the record -- what I prefer is for you to show the jury what --  
08:46 11 in writing what was said and allow him to comment on it.

08:46 12 MS. SOOTER: I'm sorry?

08:46 13 THE COURT: I would -- do you have a written version of it  
08:46 14 that you can show the jury?

08:46 15 MS. SOOTER: Yes.

08:46 16 BY MS. SOOTER:

08:46 17 Q. Do you recall that Dr. Rotem testified, "And I said  
08:46 18 it, Yonah, did not have a hardware controller. This is the  
08:46 19 same answer I gave right now. It did have a programmable  
08:46 20 clock"?

08:46 21 A. Yes.

08:46 22 Q. Now, Mr. Chu didn't ask you about that testimony from  
08:47 23 Dr. Rotem, did he?

08:47 24 A. That's correct.

08:47 25 Q. And he didn't give you the opportunity to explain any

08:47 1 of your answers Friday, did he?

08:47 2 A. Yes. That's right.

08:47 3 Q. Now, can you explain what you meant when you  
08:47 4 testified about Dr. Rotem's answers in his deposition?

08:47 5 A. In his deposition Dr. Rotem mentioned that he was  
08:47 6 confused what he was being asked about in those two lines and  
08:47 7 then corrected themselves I think at that time and at the trial  
08:47 8 here, if I recall correctly.

08:47 9 Q. Do you agree with Dr. Rotem that Yonah had a  
08:47 10 programmable clock controller?

08:47 11 A. Yes.

08:47 12 Q. Do you agree with Dr. Rotem's description about how  
08:47 13 the Yonah products worked?

08:47 14 A. Yes.

08:47 15 Q. And do you agree with Dr. Rotem's description of how  
08:47 16 the Lake series products worked?

08:47 17 A. Yes.

08:47 18 Q. You have no reason to disagree with Dr. Rotem, do  
08:48 19 you?

08:48 20 A. No. None.

08:48 21 Q. Let's take a look at your Slide 47, please.

08:48 22 Oh, let me ask you this: Do you remember when Mr. Chu  
08:48 23 asked you a number of questions about the last two providing  
08:48 24 requirements of Claim 14?

08:48 25 A. Yes.

08:48 1 Q. Let's bring those up on your Slide 47, please.

08:48 2 Now, are these last two requirements, 14[F] and 14[G], the  
08:48 3 two requirements that you have a shorthand way of referring to?

08:48 4 A. Yes. They are.

08:48 5 Q. And what is that?

08:48 6 A. I use the phrase "common clock" to mean  
08:48 7 "provide the clock frequency of the high-speed clock as an  
08:48 8 output to control the clock frequency of."

08:48 9 Q. According to the language of the claims, how does the  
08:48 10 language in 14[F], "Provide the clock frequency of the  
08:48 11 high-speed clock as an output to control," compare to the  
08:49 12 language in 14[G], "Provide the clock frequency of the  
08:49 13 high-speed clock as an output to control"?

08:49 14 MR. CHU: Objection, Your Honor. May I have a running  
08:49 15 objection with respect to claim construction testimony?

08:49 16 THE COURT: You may.

08:49 17 MR. CHU: Thank you.

08:49 18 BY MS. SOOTER:

08:49 19 Q. Is that language the same in 14[F] as it is in 14[G]?

08:49 20 A. Yes. The same words are used.

08:49 21 Q. What does a system need to do to meet the last two  
08:49 22 requirements of Claim 14?

08:49 23 A. Provide -- so 14[B] introduces a clock frequency of a  
08:49 24 high-speed clock. In 14[F] and [G], the provide the clock  
08:49 25 frequency of the high-speed clock as an output, that needs to

08:49 1 provide that as an output to both the second master device and  
08:49 2 the bus.

08:49 3 Q. The requested clock frequency?

08:49 4 A. The requested clock frequency. Correct.

08:49 5 Q. And which components must that requested clock  
08:50 6 frequency control, according to the plain meaning of the  
08:50 7 claims?

08:50 8 A. The second master device and the bus, the variable  
08:50 9 speed bus as it's called.

08:50 10 Q. Did anything Mr. Chu ask you on Friday change your  
08:50 11 noninfringement opinions with regard to these two elements?

08:50 12 A. No.

08:50 13 MS. SOOTER: Let's bring up your Slide 52, please.

08:50 14 BY MS. SOOTER:

08:50 15 Q. Can you please remind us why the Lake series of  
08:50 16 products do not meet those claim requirements?

08:50 17 A. So, again, there's the -- the use of the autonomous  
08:50 18 algorithms. So in the Lake series products, there's a running  
08:50 19 computation that is figuring out what the desired clock  
08:50 20 frequency setting should be. That just runs continuously based  
08:50 21 upon the telemetry information, the autonomous algorithms.

08:50 22 And then there are independent clocks for different parts  
08:50 23 of the processor. And so independent clock frequencies are  
08:51 24 then set.

08:51 25 Q. What does that mean with regard to the infringement

08:51 1 of the '759 patent?

08:51 2 A. That's why it doesn't infringe.

08:51 3 MS. SOOTER: I have nothing further. Pass the witness.

08:51 4 Thank you, Dr. Grunwald.

08:51 5 MR. CHU: No further questions, Your Honor.

08:51 6 Thank you, Doctor, for your time.

08:51 7 THE COURT: You may step down.

08:51 8 MR. LEE: Your Honor, ladies and gentlemen of the jury,

08:51 9 our next witness will be Mr. Hance Huston, and Mr. Mueller will

08:51 10 do the examination.

08:51 11 (The witness was sworn.)

08:51 12 MR. MUELLER: Good morning, ladies and gentlemen.

08:51 13 DIRECT EXAMINATION

08:51 14 BY MR. MUELLER:

08:52 15 Q. Good morning, Mr. Huston. Could you please introduce  
08:52 16 yourself to the jury?

08:52 17 A. Good morning. My name is Hance Huston. I live in  
08:52 18 Fishkill, New York with my wife of 38 years. We have two grown  
08:53 19 daughters, a grandson who's 14 months, and we'll have a new  
08:53 20 granddaughter later this month.

08:53 21 Q. Sir, could you tell us where you went to college?

08:53 22 A. I went to the Pennsylvania State University.

08:53 23 Q. And what did you study?

08:53 24 A. I studied engineering science, which is the honors  
08:53 25 program for engineering at Penn State.

08:53 1 Q. What year did you graduate?

08:53 2 A. I graduated with my bachelor's degree in 1982.

08:53 3 Q. And what did you do next?

08:53 4 A. I worked for IBM starting in 1982.

08:53 5 Q. Now, did you also continue your studies in the same

08:53 6 time period?

08:53 7 A. Yes. I did. I was actually able to complete all of

08:53 8 my coursework for both my bachelor's and my master's and

08:53 9 engineering science within the four years that I was at Penn

08:53 10 State, and so I just needed to complete my thesis, which I did

08:53 11 in 1984.

08:53 12 Q. So you earned your master's in '84?

08:53 13 A. Correct.

08:53 14 Q. Now, what was IBM when you joined it in 1982?

08:53 15 A. It was the largest information technology company in

08:54 16 the world.

08:54 17 Q. Does IBM still exist?

08:54 18 A. Yes. It does.

08:54 19 Q. And what type of patent portfolio has IBM maintained

08:54 20 over the years?

08:54 21 A. The largest. IBM has actually been the leader in

08:54 22 U.S. patent issuance for 28 years in a row now.

08:54 23 Q. For how long did you end up working at IBM?

08:54 24 A. For a total of 33 years.

08:54 25 Q. And are you still working there today?

08:54 1 A. No. I retired in 2015.

08:54 2 Q. Now, sir, can you give us -- well, what was your  
08:54 3 first position when you started there back in 1982?

08:54 4 A. I started as a reliability engineer in  
08:54 5 semiconductors.

08:54 6 Q. What does it mean to be a reliability engineer?

08:54 7 A. It's a multidisciplinary field working all the way  
08:54 8 from basic physics through applied materials, through design  
08:54 9 systems, electrical engineering, software, and statistics.

08:54 10 Q. And for how long did you work as a reliability  
08:55 11 engineer at IBM?

08:55 12 A. For 11 years.

08:55 13 Q. Did you receive a patent as a result of any of your  
08:55 14 work in that time period?

08:55 15 A. Yes. I did.

08:55 16 Q. What was the subject matter?

08:55 17 A. The subject matter was the reuse of silicon wafers as  
08:55 18 new.

08:55 19 Q. Now, after you finished working as a reliability  
08:55 20 engineer, what did you do next?

08:55 21 A. I changed and became a patent engineer.

08:55 22 Q. What does it mean to be a patent engineer at IBM?

08:55 23 A. So a patent engineer is another multidisciplinary  
08:55 24 field in which you take the technical knowledge you have about  
08:55 25 products and systems and materials and you apply that with an

08:55 1 understanding of patents in order to understand the value of  
08:55 2 patents.

08:55 3 Q. So what is the purpose of having a patent engineer be  
08:55 4 part of a license negotiation team?

08:55 5 A. In every case, when we were doing patent licensing,  
08:55 6 we would always have three people at the table. One of them  
08:55 7 would be a patent engineer so that you would have the technical  
08:56 8 information necessary to understand the value of the patent.  
08:56 9 We'd also have a patent attorney in order to understand the  
08:56 10 legal aspects. And we would have a licensed negotiator.

08:56 11 Q. Now, you're not a lawyer, right?

08:56 12 A. No. I'm not.

08:56 13 Q. But as a patent engineer, you helped folks understand  
08:56 14 what they were negotiating over in terms of the technology?

08:56 15 A. Yes.

08:56 16 Q. Now, how many patents did you analyze over the years  
08:56 17 as a patent engineer?

08:56 18 A. It would be tens of thousands of patents.

08:56 19 Q. And did you help the negotiators set a reasonable  
08:56 20 price for those patents?

08:56 21 A. Yes. In every case.

08:56 22 Q. Did any of those patents relate to microprocessor  
08:56 23 technology, computer chips?

08:56 24 A. Many of them did. All of the semiconductor ones  
08:56 25 would have been relevant. Many of them included specifically

08:56 1 microprocessor patents. And some of the systems ones would  
08:56 2 have included microprocessors as part of the system.

08:56 3 Q. Now, sir, at some point did you move into a different  
08:56 4 role in patent licensing?

08:56 5 A. Yes. After about six years I moved to become a  
08:57 6 licensed negotiator at our cooperative headquarters.

08:57 7 Q. So let's be clear. You actually sat at the table and  
08:57 8 negotiated license agreements?

08:57 9 A. Yes. I did.

08:57 10 Q. How many times did you sit at the table and negotiate  
08:57 11 patent license agreements?

08:57 12 A. Over 500.

08:57 13 Q. And were you the lead negotiator in many of those  
08:57 14 negotiations?

08:57 15 A. Yes.

08:57 16 Q. Can you give us a few examples of some of the  
08:57 17 companies that you negotiated with?

08:57 18 A. Some of them would be the major companies that you  
08:57 19 would probably hear of, like Sony or Hitachi or Samsung or  
08:57 20 Panasonic, a lot of Japanese and Asian companies because that  
08:57 21 was my first assignment.

08:57 22 Q. And what was your first assignment?

08:57 23 A. It was as the director of patent licensing for the  
08:57 24 entire Asia-Pacific region, running from Japan through Korea,  
08:57 25 China, Taiwan, Singapore.

08:57 1 Q. And for how long did you serve in that role?

08:57 2 A. That was three and a half years.

08:57 3 Q. What did you do next?

08:58 4 A. I returned to the United States, and I worked as  
08:58 5 director of patent licensing at our corporate headquarters.

08:58 6 Q. Now, as director of licensing, fair to say you were  
08:58 7 one of the top executives at IBM in the licensing department?

08:58 8 A. Yes.

08:58 9 Q. And how many patent license agreements did you  
08:58 10 negotiate in that role?

08:58 11 A. Again, over 500.

08:58 12 Q. Now, did you also negotiate patent purchase  
08:58 13 agreements?

08:58 14 A. Yes. I did.

08:58 15 Q. And can you give us an estimate of the number of  
08:58 16 patent purchase agreements you personally negotiated?

08:58 17 A. It would have been more than 50.

08:58 18 Q. For the purchase agreements and the license  
08:58 19 agreements that you personally negotiated, did any of those  
08:58 20 involve microprocessor patents?

08:58 21 A. Most all of them would have. Microprocessors are  
08:58 22 fundamental to computers and information technology. And many  
08:58 23 of the patent licenses were so broad as to include  
08:58 24 microprocessors as well.

08:58 25 Q. Now, sir, you have a master's degree in engineering,

08:58 1 and you worked as an engineer for 11 years. How many -- how  
08:59 2 often did you draw on that experience when you were negotiating  
08:59 3 patent licenses and patent purchases?

08:59 4 A. In every case.

08:59 5 MR. MUELLER: Your Honor, at this point we offer  
08:59 6 Mr. Huston as an expert in patent licensing and valuing  
08:59 7 microprocessor patents.

08:59 8 MR. HEINRICH: No objection.

08:59 9 THE COURT: He'll be admitted.

08:59 10 MR. MUELLER: Thank you, Your Honor.

08:59 11 BY MR. MUELLER:

08:59 12 Q. Now, sir, you're here today as an independent expert;  
08:59 13 is that right?

08:59 14 A. That is correct.

08:59 15 Q. You've been retained to provide an analysis on behalf  
08:59 16 of Intel; is that right?

08:59 17 A. That is right.

08:59 18 Q. You're being compensated for your time?

08:59 19 A. Yes. I am.

08:59 20 Q. And what's your normal consulting rate?

08:59 21 A. It is \$500 per hour.

08:59 22 Q. Are you charging that same rate in this case?

08:59 23 A. Yes.

08:59 24 Q. And how many hours have you spent working on the  
08:59 25 case?

08:59 1 A. Around 300 hours over the last three years.

08:59 2 Q. Now, has Intel engaged you for a few other projects  
08:59 3 over the last few years?

08:59 4 A. Yes. They have.

08:59 5 Q. But is this the first time you've ever testified in  
08:59 6 court for Intel?

08:59 7 A. Yes.

08:59 8 Q. In fact, is this the first time you've testified in  
08:59 9 court for anyone?

08:59 10 A. Yes.

08:59 11 Q. Does your compensation depend in any way whatsoever  
09:00 12 on the opinions that you're going to provide to the ladies and  
09:00 13 gentlemen of the jury?

09:00 14 A. Not at all.

09:00 15 Q. Does it depend on the outcome of this case?

09:00 16 A. No.

09:00 17 Q. Your opinions are your own?

09:00 18 A. Yes. They are.

09:00 19 Q. All right. Let's talk more about patent licensing,  
09:00 20 and I want to get into the factors that you used in your career  
09:00 21 at IBM, okay?

09:00 22 A. Yes.

09:00 23 Q. First, can you explain to the ladies and gentlemen of  
09:00 24 the jury what exactly is a patent license?

09:00 25 A. So a patent license is when you have a patent owner

09:00 1 and he has the ability to license other companies in order to  
09:00 2 use the patent.

09:00 3 Q. When you pay for a license, what do you get?

09:00 4 A. You get the ability to use the patent.

09:00 5 Q. Are you familiar with the terms "exclusive" and  
09:00 6 "nonexclusive" in this context?

09:00 7 A. Yes. I am.

09:00 8 Q. What is the difference between an exclusive patent  
09:00 9 license on the one hand and a nonexclusive patent license on  
09:00 10 the other?

09:00 11 A. In an exclusive license, the patent owner will be  
09:01 12 licensing the patent to one and only one party and cannot  
09:01 13 license it to anybody else.

09:01 14 In a nonexclusive license, the patent owner will license  
09:01 15 the patent to as many parties as he wishes to.

09:01 16 Q. Now, if I take a license, does that mean I have any  
09:01 17 sort of ownership stake in the patent?

09:01 18 A. No. Not at all.

09:01 19 Q. Now, sir, do you have an analogy to help us  
09:01 20 understand some of these issues?

09:01 21 A. Yes. I do.

09:01 22 MR. MUELLER: So let's pull up DDX-13.2.

09:01 23 BY MR. MUELLER:

09:01 24 Q. What do we see here?

09:01 25 A. So this is a motel. And I'd like to make the analogy

09:01 1 of a patent to a motel, where if you own a motel, then you can  
09:01 2 grant licenses, rent out rooms, in that motel.

09:01 3 MR. MUELLER: So let's go to DDX-13.3.

09:01 4 BY MR. MUELLER:

09:01 5 Q. And if I asked you in this analogy for a nonexclusive  
09:01 6 patent license, what would that look like?

09:01 7 A. So in a nonexclusive license, you can rent out many  
09:02 8 rooms in that motel. And you could rent out \$30 for a room on  
09:02 9 the second floor or \$30 for a room on the first floor. More  
09:02 10 than one person can rent out rooms.

09:02 11 Q. So even if I get a room, someone else might as well?

09:02 12 A. Yes.

09:02 13 MR. MUELLER: Let's go to DDX-13.4.

09:02 14 BY MR. MUELLER:

09:02 15 Q. And now I want to ask you: If I were to request an  
09:02 16 exclusive patent license, how would that work in your analogy?

09:02 17 A. So in this case, the motel owner would be able to  
09:02 18 rent the hotel only to one person, you. And therefore every  
09:02 19 room would be reserved only for your use.

09:02 20 MR. MUELLER: Let's go to DDX-13.5.

09:02 21 BY MR. MUELLER:

09:02 22 Q. What if I wanted to purchase a patent? How would  
09:02 23 that work in your analogy?

09:02 24 A. It would be just like purchasing the actual motel and  
09:02 25 becoming the new owner and you could buy it for, say, \$200,000.

09:02 1 Q. Now, what's more expensive, buying a patent or taking  
09:02 2 a license to a patent?

09:02 3 A. Buying a patent.

09:02 4 Q. And why is that?

09:03 5 A. Because as -- when you buy the patent, you become the  
09:03 6 new owner and you have all the control of the patent itself as  
09:03 7 well as the ability to license it to others.

09:03 8 MR. MUELLER: We can take this slide down now.

09:03 9 BY MR. MUELLER:

09:03 10 Q. Now, sir, I want to ask you about the types of  
09:03 11 information that you used in the hundreds of times you sat at  
09:03 12 the table and negotiated licenses. Do you that subject in  
09:03 13 mind?

09:03 14 A. Yes. I do.

09:03 15 MR. MUELLER: Let's take a look at DDX-13.6.

09:03 16 BY MR. MUELLER:

09:03 17 Q. What do we see here?

09:03 18 A. So these -- this is the five different types of  
09:03 19 information that I would commonly use that are real-world  
09:03 20 evidence of what the price of a patent license should be.

09:03 21 Q. Now, why is real-world evidence significant?

09:03 22 A. Well, it demonstrates what people have actually  
09:03 23 valued patents as, and therefore it is the best evidence with  
09:03 24 regard to the value of what a patent is.

09:03 25 Q. So let's go through these one by one.

09:03 1 MR. MUELLER: We'll go to DDX-13.8. I want to focus on  
09:04 2 the top one, the nature of the patents, so we can go to 13.8.

09:04 3 BY MR. MUELLER:

09:04 4 Q. What do we see here?

09:04 5 A. So the patents themselves have obviously been  
09:04 6 invented by somebody, and perhaps they've even been owned by  
09:04 7 several different owners over time.

09:04 8 The fact of their actual use by these prior owners is  
09:04 9 important because it demonstrates that the patents are valuable  
09:04 10 and are actually used by someone.

09:04 11 Q. Now, when you were at IBM, did IBM actually use its  
09:04 12 important patents?

09:04 13 A. Yes. We did, and we knew exactly which ones we were  
09:04 14 using.

09:04 15 Q. Now, were you here when Dr. Sullivan testified  
09:04 16 earlier in this trial?

09:04 17 A. Yes.

09:04 18 Q. And he's VLSI's damages expert, right?

09:04 19 A. Yes.

09:04 20 MR. MUELLER: Let's pull up on the screen some testimony  
09:04 21 he gave on Day 3. This is Page 689, Lines 10 through 25.

09:04 22 BY MR. MUELLER:

09:04 23 Q. Question: "And in thinking about the benefits of  
09:04 24 these patents, is it relevant whether Freescale or NXP or  
09:05 25 SigmaTel ever incorporated the asserted patents into specific

09:05 1 products?"

09:05 2 Dr. Sullivan answered, "No. It is not. That particular  
09:05 3 issue is not relevant and typically would be considered a red  
09:05 4 herring issue. That means it's a distraction from what is  
09:05 5 actually relevant."

09:05 6 And then he continued. I want to ask you about what he  
09:05 7 said right there. Do you agree?

09:05 8 A. No. I strongly disagree.

09:05 9 Q. And why do you disagree?

09:05 10 A. Because the actual use is real-world evidence of the  
09:05 11 value of the patents by the inventors or the subsequent owners.

09:05 12 MR. MUELLER: Let's go to Dr. Sullivan at Page 764, Line  
09:05 13 23, through 765, Line 6.

09:05 14 BY MR. MUELLER:

09:05 15 Q. Question: "And you said you thought it was a red  
09:05 16 herring and misleading to talk about that issue. Do you  
09:05 17 remember that?"

09:05 18 Answer from Dr. Sullivan, "Not to talk about the issue,  
09:06 19 yet my perception of the arguments that Intel and, with all due  
09:06 20 respect, you, Mr. Lee, have been making. I do believe those  
09:06 21 issues are, as I would describe them, a red herring and  
09:06 22 misleading."

09:06 23 Mr. Huston, do you think it was misleading for Intel to  
09:06 24 focus on the use or lack thereof of these patents by the prior  
09:06 25 owners?

09:06 1 A. Absolutely not.

09:06 2 Q. Why not?

09:06 3 A. Because, again, the real-world evidence of actual use  
09:06 4 by the owners is the first and primary estimate of what the  
09:06 5 value of the patents is.

09:06 6 MR. MUELLER: Let's go back to DDX-13.8.

09:06 7 BY MR. MUELLER:

09:06 8 Q. There's a second bullet point here, "whether other  
09:06 9 companies sought a license to the patents." What does that  
09:06 10 refer to?

09:06 11 A. Well, it refers to the fact that if a patent is  
09:06 12 widely used, then many different companies will want to have a  
09:06 13 license to that patent so that they can use it as well.

09:06 14 Q. Why is that meaningful?

09:06 15 A. Well, it's meaningful because it not only  
09:06 16 demonstrates the value of the patent itself, but it also  
09:07 17 provides information with regard to the value of that patent  
09:07 18 based upon the licenses that are entered into.

09:07 19 MR. MUELLER: Let's go to DDX-13.9.

09:07 20 BY MR. MUELLER:

09:07 21 Q. And this category of information, the nature of the  
09:07 22 patents, can you put that into the terms of your analogy?

09:07 23 A. Yes. So I would compare this to, in one case, a  
09:07 24 motel that's along a freeway. It's like many other motels, but  
09:07 25 there's lots of cars that just simply go by. Some people may

09:07 1 stop or maybe they just continue right on by.

09:07 2 On the other hand, you could have a motel that is at a  
09:07 3 resort. It's a really nice place. It's something that lots of  
09:07 4 people want to go to, as in getting a license.

09:07 5 Q. And which would charge the higher price?

09:07 6 A. The one that is the resort motel.

09:07 7 MR. MUELLER: Let's go to DDX-13.10.

09:07 8 BY MR. MUELLER:

09:07 9 Q. The second category of information, "prior sales of  
09:07 10 the patents," what does that refer to?

09:07 11 A. It refers to actual sales of the patents as they are  
09:08 12 passed from one owner to another.

09:08 13 Q. Why is that meaningful in a license negotiation?

09:08 14 A. Because it again shows the actual value that has been  
09:08 15 negotiated with regard to the value of the patents and have  
09:08 16 been agreed to by two different parties.

09:08 17 MR. MUELLER: Let's go to DDX-13.11.

09:08 18 BY MR. MUELLER:

09:08 19 Q. And can you put this in the terms of your analogy?

09:08 20 A. So in this case, if you look at a motel and you know  
09:08 21 that it has been sold twice previously, perhaps for \$175,000 or  
09:08 22 \$200,000, then not only do you know what the value of that  
09:08 23 motel is, but you have a pretty good idea of what the rental  
09:08 24 rate or license rate would be for a room at that hotel.

09:08 25 Q. Would you pay as a rental rate any price similar to

09:08 1 the purchase price?

09:08 2 A. No. It would be much, much less.

09:08 3 MR. MUELLER: Let's go to DDX-13.12.

09:08 4 BY MR. MUELLER:

09:08 5 Q. Third category, "prior comparable agreements between  
09:08 6 the parties." What does this refer to?

09:08 7 A. So this refers to the fact that if you know that the  
09:09 8 two parties to a negotiation have previously had agreements for  
09:09 9 patents that are comparable, then comparable patents, the new  
09:09 10 ones, would probably have about the same value.

09:09 11 Q. And why is that relevant to a license negotiation?

09:09 12 A. Because it again shows the value that these parties  
09:09 13 in particular have placed on patents that are similar.

09:09 14 MR. MUELLER: So let's go to DDX-13.13.

09:09 15 BY MR. MUELLER:

09:09 16 Q. And how would this work in your analogy?

09:09 17 A. So if you know that for a particular motel that there  
09:09 18 have been agreements previously, you've stayed and have paid  
09:09 19 \$25 a night or \$30 a night in a particular room, then for a  
09:09 20 very similar room in the same motel, you would pay about the  
09:09 21 same.

09:09 22 MR. MUELLER: Let's go to DDX-13.14 and turn to the fourth  
09:09 23 category.

09:09 24 BY MR. MUELLER:

09:09 25 Q. "Prior comparable negotiations between the parties,"

09:09 1 what does that refer to?

09:09 2 A. That refers to actual offers that have been made by  
09:10 3 one or more of the parties with regard to similar patents.

09:10 4 Q. And why is that relevant?

09:10 5 A. Because it again shows the specific value that has  
09:10 6 been placed by the parties on patents that are similar.

09:10 7 MR. MUELLER: So let's go to DDX-13.15.

09:10 8 BY MR. MUELLER:

09:10 9 Q. How would this category of information fit into your  
09:10 10 analogy?

09:10 11 A. So if you have a motel and you know that it has been  
09:10 12 advertised that -- or offered that you can rent a room for \$25  
09:10 13 or \$35 a night, then it would be expected that for another room  
09:10 14 in the same motel that the value would be about the same.

09:10 15 MR. MUELLER: Let's go to DDX-13.16.

09:10 16 BY MR. MUELLER:

09:10 17 Q. Last category, "prior comparable agreements with  
09:10 18 third parties." What is this?

09:10 19 A. So this is where one of the parties to the  
09:10 20 negotiation has also had similar agreements, comparable  
09:10 21 agreements, with other parties.

09:10 22 Q. Why is that significant?

09:10 23 A. Because it shows a broader range of exactly how  
09:11 24 patents have been valued that are similar to the patents that  
09:11 25 are at question.

09:11 1 MR. MUELLER: Let's go to DDX-13.17.

09:11 2 BY MR. MUELLER:

09:11 3 Q. Can you explain what we see here?

09:11 4 A. So, again, along the same freeway, if you have  
09:11 5 several motels that are pretty much the same, and you know that  
09:11 6 previously you had stayed at one of them for \$25 a night or \$30  
09:11 7 for the other two, then a very similar motel on that same  
09:11 8 freeway would end up costing about the same.

09:11 9 MR. MUELLER: Let's go to DDX-13.18.

09:11 10 BY MR. MUELLER:

09:11 11 Q. We've now gone through all five categories of  
09:11 12 real-world evidence. And again, sir, did you, in fact, use  
09:11 13 these same categories of information yourself in your career at  
09:11 14 IBM?

09:11 15 A. Yes. This was a rather standard toolkit that we  
09:11 16 would use in any negotiation where we could.

09:11 17 Q. And this toolkit reflects economics, and it also  
09:11 18 reflects common sense; is that fair?

09:11 19 A. Yes. It is.

09:11 20 Q. Now, have you ever heard of something called "hedonic  
09:11 21 regression"?

09:11 22 A. I have heard of hedonic regression only in the  
09:12 23 context of this litigation.

09:12 24 Q. Did you ever include hedonic regression in the  
09:12 25 toolkit you used in license negotiations at IBM?

09:12 1 A. Never.

09:12 2 Q. Now, you've explained to us some of the categories of  
09:12 3 information that you analyzed in conducting a license  
09:12 4 negotiation. I want to ask you about a little bit different  
09:12 5 subject, the form of the payments in the agreements that you  
09:12 6 negotiated. Do you have that subject in mind?

09:12 7 A. Yes. I do.

09:12 8 Q. First, are you familiar with the term "lump sum  
09:12 9 payment"?

09:12 10 A. Yes. I am.

09:12 11 Q. What is it?

09:12 12 A. A lump sum payment is a single payment that has been  
09:12 13 contracted that will be paid once and only once and will  
09:12 14 satisfy the terms of the contract.

09:12 15 Q. Are you also familiar with the term "running  
09:12 16 royalty"?

09:12 17 A. Yes.

09:12 18 Q. What does that refer to?

09:12 19 A. A running royalty is a payment that would be based on  
09:12 20 something, like number of units or perhaps revenue, and would  
09:13 21 have to have royalty reports in order to demonstrate the value.

09:13 22 Q. What was the form of payment in the hundreds of  
09:13 23 agreements that you negotiated in your years at IBM?

09:13 24 A. In every case, they were a lump sum.

09:13 25 Q. In every case, it was a lump sum?

09:13 1 A. Yes.

09:13 2 Q. Why was that?

09:13 3 A. There are several reasons why just about everybody  
09:13 4 does lump sum payments. They provide clarity and certainty.  
09:13 5 You know exactly how much is going to be paid. You don't have  
09:13 6 to take a look at what are royalty reports or what are disputes  
09:13 7 with regard to royalty reports or audits of royalty reports.

09:13 8 Q. And when you pay a lump sum for a license, how often  
09:13 9 are you able to use the patents that you take the license to?

09:13 10 A. You're able to use the patents for all and any use.

09:13 11 Q. As many times as you want?

09:13 12 A. Yes.

09:13 13 Q. And that was the customary form of payment in the  
09:13 14 industry when you practiced?

09:13 15 A. Yes.

09:13 16 Q. Now, I want to take this toolkit you described and  
09:14 17 apply it to the facts in this case. Okay, sir?

09:14 18 A. Yes.

09:14 19 Q. But before we do that, I want to get some basic facts  
09:14 20 on the table. Who owns the '373 and '759 patents that are  
09:14 21 asserted in this case?

09:14 22 A. VLSI.

09:14 23 Q. How did VLSI come to own these two patents?

09:14 24 A. They bought them from NXP.

09:14 25 Q. Before this case, had you ever heard of either the

09:14 1 '373 or '759 patent?

09:14 2 A. Never.

09:14 3 Q. Now, there's been some arguments and suggestions in  
09:14 4 this case about NXP receiving money if there were a recovery in  
09:14 5 this case. You heard -- you've heard those arguments?

09:14 6 A. Yes.

09:14 7 Q. I want to ask you the following question, just yes or  
09:14 8 no, okay? Yes or no.

09:14 9 Yes or no, would NXP receive the majority of any money  
09:14 10 that VLSI gets from this case?

09:14 11 A. No.

09:14 12 Q. Now, you recall at the very beginning of this trial  
09:15 13 Mr. Stolarski, the CEO of VLSI, was sitting over here?

09:15 14 A. Yes.

09:15 15 Q. Would Mr. Stolarski personally stand to benefit from  
09:15 16 any recovery in this case?

09:15 17 A. Yes.

09:15 18 Q. Now, you've watched this trial since it began; is  
09:15 19 that right, sir?

09:15 20 A. Yes.

09:15 21 Q. And you've heard Intel's witnesses explain that  
09:15 22 Intel's position is it does not infringe either one of these  
09:15 23 two patents. Do you understand that's Intel's position?

09:15 24 A. Yes. I do understand that.

09:15 25 Q. If they're right, what would be owed by Intel to

09:15 1 VLSI?

09:15 2 A. Exactly zero.

09:15 3 Q. Now, sir, have you done an analysis of what the value  
09:15 4 of the patents would be to Intel in some hypothetical world  
09:15 5 where Intel is using the patents?

09:15 6 A. Yes. I have.

09:15 7 Q. And how'd you do that?

09:15 8 A. I -- I worked through what is called a hypothetical  
09:15 9 negotiation.

09:15 10 Q. And what factors did you consider in analyzing this  
09:16 11 hypothetical negotiation?

09:16 12 A. All of the ones that I've described with regard to a  
09:16 13 toolkit of valuing patents.

09:16 14 Q. So I want to ask you about this hypothetical  
09:16 15 negotiation. But just to be crystal clear, you're analyzing a  
09:16 16 hypothetical world where Intel uses the patents, right?

09:16 17 A. Yes.

09:16 18 Q. But you understand in this world, Intel's position is  
09:16 19 it doesn't use the patents?

09:16 20 A. Yes. I do understand that.

09:16 21 Q. Okay. So let's go into the hypothetical negotiation  
09:16 22 world. Who's sitting at the table in this hypothetical  
09:16 23 negotiation?

09:16 24 A. It would be Intel and Freescale.

09:16 25 Q. Why is Freescale sitting there?

09:16 1 A. Because at the time of the first alleged  
09:16 2 infringement, Freescale was the owner of both patents.

09:16 3 Q. And when is the first allegation of infringement?

09:16 4 A. It is the fourth quarter of 2011.

09:16 5 Q. So the hypothetical negotiation has Intel and  
09:16 6 Freescale sitting at the table back in 2011. Do I have that  
09:16 7 right?

09:16 8 A. Yes.

09:16 9 Q. And they're negotiating a license to the two patents,  
09:16 10 again, in this hypothetical world. Do I have that right?

09:17 11 A. Yes.

09:17 12 Q. And so what did you do to try to figure out what  
09:17 13 would happen in that discussion?

09:17 14 A. So I looked at agreements. I looked at the nature of  
09:17 15 the patents. I looked at agreements that are comparable. I  
09:17 16 went through all of the different things that would show the  
09:17 17 value of the patents.

09:17 18 Q. And how did your analysis of this hypothetical  
09:17 19 negotiation compare to all the negotiations you conducted at  
09:17 20 IBM?

09:17 21 A. It was similar.

09:17 22 MR. MUELLER: Let's go to DDX-13.19.

09:17 23 BY MR. MUELLER:

09:17 24 Q. And, sir, did you, in fact, go through each one of  
09:17 25 these factors and apply them to the facts in this case?

09:17 1 A. Yes. I did.

09:17 2 Q. So let's do that.

09:17 3 MR. MUELLER: Let's go to DDX-13.20, and let's start with  
09:17 4 the "nature of the asserted patents." And let's go to  
09:17 5 DDX-13.21.

09:17 6 BY MR. MUELLER:

09:17 7 Q. What did you find?

09:17 8 A. Well, I found that there was no evidence of use by  
09:17 9 the owners. Any of the owners. And that no other company ever  
09:17 10 sought a license. And that these patents have been sold  
09:18 11 multiple times for small amounts of money.

09:18 12 Q. Now, sir, have you read the patents yourself?

09:18 13 A. Multiple times.

09:18 14 Q. Do you understand them?

09:18 15 A. Yes. I do.

09:18 16 Q. And how does the nature of the patents relate to what  
09:18 17 would have happened in this hypothetical negotiation?

09:18 18 A. Well, both of the parties, Freescale and Intel, would  
09:18 19 have understood the nature of the patents and would have valued  
09:18 20 them appropriately.

09:18 21 Q. So the prior owners of these patents were some  
09:18 22 companies called SigmaTel, Freescale and NXP, right?

09:18 23 A. Yes.

09:18 24 Q. Did those companies make products?

09:18 25 A. Yes. They did.

09:18 1 Q. Could they have used the asserted patents in their  
09:18 2 products if they wanted to?

09:18 3 A. Yes.

09:18 4 Q. And have you seen any evidence whatsoever that they  
09:18 5 did?

09:18 6 A. None.

09:18 7 Q. So what would that look like in your motel analogy,  
09:18 8 for example?

09:18 9 A. It would look as though nobody was renting a room at  
09:18 10 the motel.

09:18 11 MR. MUELLER: Let's go to DDX-13.22.

09:18 12 BY MR. MUELLER:

09:18 13 Q. Second category, "prior sales of the asserted  
09:19 14 patents."

09:19 15 MR. MUELLER: And, Your Honor, here I'm -- I'm going to  
09:19 16 have to ask Your Honor, with your permission, to seal the  
09:19 17 courtroom. And it's for confidential information of VLSI and  
09:19 18 other companies that I just want to be careful to protect.

09:19 19 THE COURT: Okay. If you're not under the protective  
09:19 20 order, I'd ask you to leave the courtroom at this time.

21 MR. MUELLER: And if we could also just shut off the  
22 public feed.

23 THE COURT: We will.

24 MR. MUELLER: Thank you, Your Honor.

25 (Sealed proceedings.)

09:43 1 MR. MUELLER: Your Honor, at this point we can unseal the  
09:43 2 courtroom.

09:43 3 THE COURT: You read my mind.

09:44 4 MR. MUELLER: Now, I want to put up DDX-13.41.

09:44 5 BY MR. MUELLER:

09:44 6 Q. And, sir, I'm not going to ask you about all the work  
09:44 7 we've done to get here. But what do we see here?

09:44 8 A. So in addition to identifying what I would consider  
09:44 9 to be the correct value, \$2.2 million for the two patents, I  
09:44 10 also looked at how that would be distributed amongst the two  
09:44 11 patents if only one of them were found to be infringed.

09:44 12 Q. And what are those numbers, sir?

09:44 13 A. Those numbers are 1.47 million for the '759 patent  
09:44 14 and \$750,000 for the '373 patent.

09:44 15 Q. And, again, these are lump sums?

09:44 16 A. Yes.

09:44 17 Q. Now, you heard Dr. Sullivan and what he suggested to  
09:44 18 the jury in terms of what these patents are worth, right?

09:44 19 A. Yes.

09:44 20 Q. I'm not going to ask you about any of the specifics  
09:44 21 of his math, and I also don't want you to say his specific  
09:44 22 number out loud, okay?

09:45 23 A. Okay.

09:45 24 Q. But I want to ask you this: Is the number he's  
09:45 25 suggesting to the jury in the millions or the billions?

09:45 1 A. The billions.

09:45 2 Q. Well, how can it be that he's suggesting these  
09:45 3 patents are worth billions and you're saying 2.2 million?

09:45 4 A. Well, there's several things.

09:45 5 One, the method that he uses, hedonic regression, is  
09:45 6 something that I have never seen in any negotiation. And it is  
09:45 7 not only unreliable but obviously can give incorrect results.

09:45 8 Q. Sir, you've negotiated hundreds of licenses in your  
09:45 9 time at IBM, right?

09:45 10 A. Yes.

09:45 11 Q. If someone sat at the table and asked you for  
09:45 12 billions for two of these types of patents, how would you have  
09:45 13 responded to them?

09:45 14 A. I would have rejected it and walked out.

09:45 15 MR. MUELLER: Now we can take this slide down.

09:45 16 BY MR. MUELLER:

09:46 17 Q. Earlier in this case we heard about the  
09:46 18 Georgia-Pacific factors. You're not a lawyer, but do you know  
09:46 19 what the Georgia-Pacific factors are?

09:46 20 A. Yes. I do.

09:46 21 Q. And how many factors are there?

09:46 22 A. There are 15.

09:46 23 Q. Have you considered these 15 Georgia-Pacific factors  
09:46 24 in your work in this case?

09:46 25 A. Yes. I have.

09:46 1 Q. All 15?

09:46 2 A. Yes.

09:46 3 MR. MUELLER: Now, let's pull up DDX-13.42.

09:46 4 BY MR. MUELLER:

09:46 5 Q. What do we see here, sir?

09:46 6 A. So these are three of the Factors, 8, 9 and 10, that  
09:46 7 are specific to the use of the patents by the licensor, which  
09:46 8 in this case would be Freescale in the hypothetical, VLSI in  
09:46 9 this lawsuit.

09:46 10 Q. And why do you find these three factors significant?

09:46 11 A. Because again the actual use by the licensor is  
09:46 12 relevant. It is required by the Georgia-Pacific factors, and  
09:46 13 the fact that there is no evidence of any use by any previous  
09:46 14 owner shows that there's very little value associated with the  
09:47 15 patents.

09:47 16 MR. MUELLER: Let's go to DDX-13.43.

09:47 17 BY MR. MUELLER:

09:47 18 Q. We have three more Georgia-Pacific factors here.

09:47 19 Tell us what we see.

09:47 20 A. So the first one, No. 1, actually has to do with have  
09:47 21 these patents been licensed? And the fact that nobody has ever  
09:47 22 specifically licensed these patents and no one has sought a  
09:47 23 license shows that the value is low.

09:47 24 Q. So how do these factors impact your opinion as to  
09:47 25 what would happen in a hypothetical negotiation?

09:47 1 A. All of these factors are supported by my analysis and  
09:47 2 support my analysis as well.

09:47 3 MR. MUELLER: Let's go to PDX-4.12.

09:47 4 BY MR. MUELLER:

09:47 5 Q. This is a slide from VLSI's opening statement. You  
09:47 6 saw the opening statement?

09:47 7 A. Yes. I did.

09:47 8 Q. It says "The Cycle of Innovation." I want to ask you  
09:47 9 a couple questions.

09:47 10 Has VLSI ever actually licensed the '373 patent to any  
09:48 11 other company?

09:48 12 A. No. They have not.

09:48 13 Q. Ever licensed the '759 patent to any other company?

09:48 14 A. No. They have not.

09:48 15 Q. Are you aware of any evidence whatsoever that this  
09:48 16 cycle has actually happened?

09:48 17 A. None whatsoever.

09:48 18 MR. MUELLER: We can take this down.

09:48 19 BY MR. MUELLER:

09:48 20 Q. Dr. Sullivan and his analysis, just a few more  
09:48 21 questions about that.

09:48 22 Have you seen Dr. Sullivan identify any real-world patent  
09:48 23 sales that support his approach?

09:48 24 A. None.

09:48 25 Q. Have you seen Dr. Sullivan identify any real-world

09:48 1 licenses that support his approach?

09:48 2 A. None.

09:48 3 Q. And how many times have you encountered someone using  
09:48 4 a methodology like the one Dr. Sullivan advocated to the jury?

09:48 5 A. Never.

09:48 6 MR. MUELLER: Now, let's pull up Dr. Sullivan transcript  
09:48 7 Page 757, Lines 19 through 22.

09:48 8 BY MR. MUELLER:

09:49 9 Q. Question: "Thank you, Doctor. So do Intel's experts  
09:49 10 in doing this analysis, do they account for Intel's use of the  
09:49 11 patents?"

09:49 12 Answer: "No. They don't. So if -- so this is kind of  
09:49 13 interesting to me."

09:49 14 Now, do you understand Dr. Sullivan to be criticizing you  
09:49 15 for not having considered the extent of alleged use of these  
09:49 16 patents?

09:49 17 A. Yes.

09:49 18 Q. Now, again Intel's position is they've not used them  
09:49 19 at all, but we're in this hypothetical world right now. Did  
09:49 20 you consider use of the patents in this hypothetical world?

09:49 21 A. Yes. I did.

09:49 22 Q. And what, in fact, did you consider?

09:49 23 A. I actually considered, based upon identifying all of  
09:49 24 these various agreements, the fact that Intel in those  
09:49 25 agreements could use the patents as much -- for any and all

09:49 1 use, which is greater than the alleged use of these specific  
09:49 2 patents.

09:49 3 Q. And is that consistent or inconsistent with your two  
09:50 4 decades of experience at IBM?

09:50 5 A. Consistent.

09:50 6 MR. MUELLER: Let's pull up the transcript at Page 831, 4  
09:50 7 to 10. It's Dr. Sullivan again.

09:50 8 BY MR. MUELLER:

09:50 9 Q. Question: "And at the time of those agreements, did  
09:50 10 NXP have evidence about the value of Intel's use of the '373,  
09:50 11 '759 patents?

09:50 12 "No. That would not be available because, again, that  
09:50 13 would be based upon confidential information of Intel that is  
09:50 14 only available through, you know, a court proceeding such as  
09:50 15 this and is still maintained confidential."

09:50 16 Now, you understand Dr. Sullivan's criticism here to be  
09:50 17 that there's certain information that can only be learned  
09:50 18 through a case like this and that that would affect the royalty  
09:50 19 in a hypothetical negotiation. You understand that's his  
09:50 20 position?

09:50 21 A. I understand that.

09:50 22 Q. Do you agree with that?

09:50 23 A. I disagree.

09:50 24 Q. And why do you disagree?

09:50 25 A. I disagree because the parties, NXP, Freescale,

09:50 1 Intel, are all sophisticated parties. They have licensing  
09:51 2 professionals, like myself, patent engineers, patent lawyers.

09:51 3 They understand what the value is specifically of their  
09:51 4 own patents.

09:51 5 They understand how those patents are used in their own  
09:51 6 products.

09:51 7 They have access to publicly available information with  
09:51 8 regard to Intel's products, such as specifications, technical  
09:51 9 articles, patents, lots of different things. And they would  
09:51 10 have a good basis for understanding the use and value of the  
09:51 11 patents.

09:51 12 Q. And how did you yourself deal with this issue when  
09:51 13 you were negotiating agreements at IBM?

09:51 14 A. Well, we would do exactly what I just described. We  
09:51 15 would look at all of the publicly available information. We  
09:51 16 would even buy, for instance, Intel products and tear them  
09:51 17 apart in order to understand them or test them.

09:51 18 So there's a lot of different ways that these companies,  
09:51 19 or VLSI, could understand the actual use and value of the  
09:52 20 patents.

09:52 21 Q. Now, you said you never used hedonic regression in  
09:52 22 your own career, right?

09:52 23 A. I never used it.

09:52 24 Q. You've also reviewed a number of deposition  
09:52 25 transcripts in this case?

09:52 1 A. Yes.

09:52 2 Q. You understand VLSI's CEO Michael Stolarski has done  
09:52 3 work as a licensing attorney himself, right?

09:52 4 A. Yes.

09:52 5 Q. According to his deposition, had he ever used hedonic  
09:52 6 regression personally in his own career?

09:52 7 A. No.

09:52 8 Q. How about Kevin Klein, the former director of patent  
09:52 9 licensing at Freescale, had he used hedonic regression?

09:52 10 A. No.

09:52 11 Q. How about Aaron Waxler, the former vice president of  
09:52 12 intellectual property at NXP, had he used regression?

09:52 13 A. No.

09:52 14 Q. James Kovacs, Intel's director of patent listening,  
09:52 15 had he ever used regression?

09:52 16 A. No.

09:52 17 Q. Now, we spent some time going through what would have  
09:52 18 happened in this hypothetical world, right, Mr. Huston?

09:52 19 A. Yes.

09:52 20 Q. I now want to leave that hypothetical world and  
09:53 21 return to right here, where Intel says it's never used or  
09:53 22 infringed these two patents once. If they're right, what do  
09:53 23 they owe?

09:53 24 A. Exactly zero.

09:53 25 Q. Thank you, sir.

09:53 1 MR. MUELLER: I have no further questions.

09:53 2 MR. HEINRICH: Is this a good time for a short break?

09:53 3 THE COURT: I was just trying to figure out which lawyer  
09:53 4 was going to stand up. I think this would be a great time for  
09:53 5 a break. We're going to keep it short. If -- we'll be  
09:53 6 bringing you back in at five minutes after 10:00.

09:53 7 Remembering my instructions not to discuss the case  
09:53 8 amongst yourselves, you are dismissed.

09:53 9 THE BAILIFF: All rise.

09:53 10 (Jury exited the courtroom at 9:53.)

09:53 11 THE COURT: Thank you. You may be seated.

09:53 12 Doctor -- is it doctor?

09:53 13 THE WITNESS: Mister.

09:53 14 THE COURT: Mister -- you may -- no offense. You may step  
09:54 15 down.

09:54 16 Anything we need to take up briefly?

09:54 17 MR. HEINRICH: Not from us.

09:54 18 MR. LEE: Not for us, Your Honor.

09:54 19 THE BAILIFF: All rise.

09:54 20 (Recess taken from 9:54 to 10:07.)

10:07 21 THE BAILIFF: All rise.

10:07 22 THE COURT: Please remain standing for the jury.

10:07 23 (The jury entered the courtroom at 10:07.)

10:07 24 THE COURT: Thank you. You may be seated.

10:08 25 Yes, sir.

10:08 1 MR. HEINRICH: Good morning, ladies and gentlemen.

10:08 2 CROSS-EXAMINATION

10:08 3 BY MR. HEINRICH:

10:08 4 Q. Good morning, Mr. Huston.

10:08 5 A. Good morning.

10:08 6 Q. You got involved in this case after you were  
10:08 7 recommended to Intel's attorneys by a former IBM attorney who  
10:08 8 went on to become an attorney at Intel, correct?

10:08 9 A. Yes.

10:08 10 Q. And you worked with this Intel attorney for 22 years?

10:08 11 A. Yes.

10:08 12 Q. And you consider this Intel attorney to be a friend?

10:08 13 A. Yes.

10:08 14 Q. And this was your first experience as an expert  
10:08 15 witness; is that right?

10:08 16 A. Yes.

10:08 17 Q. But since coming into this case, you're now serving  
10:08 18 as an expert witness for Intel in four or five other cases?

10:08 19 A. Currently, I have three active cases with Intel and  
10:08 20 one case with another company.

10:09 21 Q. And they're all with Mr. Lee's firm, correct?

10:09 22 A. No. Actually one of the Intel cases is with another  
10:09 23 firm.

10:09 24 Q. But you're working with multiple cases with Mr. Lee's  
10:09 25 firm, correct?

10:09 1 A. Yes.

10:09 2 Q. Now, you were deposed in this case, correct?

10:09 3 A. Yes.

10:09 4 Q. And through the time of your deposition, you had  
10:09 5 worked about 200 hours on the Intel/VLSI dispute. Do you  
10:09 6 recall that?

10:09 7 A. It was around 150 to 200 hours. Yes.

10:09 8 Q. Okay. So I just want to talk about what you did in  
10:09 9 those 150 to 200 hours. You submitted an expert report in this  
10:09 10 case, correct?

10:09 11 A. Yes.

10:09 12 Q. It was over 750 pages long?

10:09 13 A. Yes.

10:09 14 Q. And as part of that work, you reviewed over 40 other  
10:09 15 expert reports?

10:09 16 A. Yes.

10:09 17 Q. And around 80 deposition transcripts?

10:10 18 A. Yes.

10:10 19 Q. Each of which was 100, 200 pages long?

10:10 20 A. Yes.

10:10 21 Q. And thousands and thousands of pages of documents  
10:10 22 that the parties produced?

10:10 23 A. Yes.

10:10 24 Q. And all of the many license agreements that you  
10:10 25 testified about earlier this morning?

10:10 1 A. Yes.

10:10 2 Q. And patents that were licensed under those  
10:10 3 agreements?

10:10 4 A. Yes.

10:10 5 Q. And you did that all in 150 to 200 hours?

10:10 6 A. Yes.

10:10 7 Q. And without any help from anyone?

10:10 8 A. It was my own work. Yes.

10:10 9 Q. Now, you mentioned one type of royalty structure  
10:10 10 called a lump sum structure, correct?

10:10 11 A. Yes.

10:10 12 Q. There's also a royalty structure called a running  
10:10 13 royalty. Are you familiar with that?

10:10 14 A. Yes.

10:10 15 Q. Now, let's just talk about this terminology.

10:11 16 Under a running royalty, the more the licensee uses the  
10:11 17 licensed patents, the more the licensee pays in royalties,  
10:11 18 correct?

10:11 19 A. Use is --

10:11 20 Q. Can you --

10:11 21 A. -- one of the things that can be used with regard to  
10:11 22 a running royalty.

10:11 23 Q. So you're familiar with running royalty agreements  
10:11 24 where the more the licensee uses the licensed patents, the more  
10:11 25 the licensee pays in royalties, correct?

10:11 1 A. I'm familiar --

10:11 2 Q. Can you answer that yes or no?

10:11 3 A. Not exactly.

10:11 4 Q. Okay. Then I'll try to ask a better question then.

10:11 5 So there are running royalty agreements where the licensee  
10:11 6 pays a royalty based on the sales of the licensed products.

10:11 7 You're familiar with that, correct?

10:12 8 A. Yes.

10:12 9 Q. So the more products the licensee sells that are  
10:12 10 covered by the licensed patents, the more the licensee pays in  
10:12 11 royalties, correct?

10:12 12 A. Yes.

10:12 13 Q. So let's say that incorporating the licensed patents  
10:12 14 turns out to be very valuable for the licensee's products, and  
10:12 15 incorporating that technology allows the licensee to sell many  
10:12 16 more licensed products because of that technology, under a  
10:12 17 running royalty structure, the licensee would wind up paying  
10:12 18 more to the patent owner in royalties, correct?

10:12 19 A. When there is more use, then there would be more  
10:12 20 payment based upon the number of units sold.

10:12 21 Q. Under a running royalty structure?

10:12 22 THE COURT: We are trying to get done with the trial.

10:13 23 And -- which is not your fault. But if you would -- on the  
10:13 24 cross, if you'd answer his questions just directly with a yes  
10:13 25 or a no, if you can, that'll save us a little bit of time.

10:13 1 THE WITNESS: Okay. Thank you, Your Honor.

10:13 2 BY MR. HEINRICH:

10:13 3 Q. So that's under a running royalty structure, correct?

10:13 4 A. Yes.

10:13 5 Q. Now, a lump sum royalty doesn't vary based on use of  
10:13 6 the licensed technology, correct?

10:13 7 A. No.

10:13 8 Q. Are you saying no, you disagree? Or no, it doesn't  
10:13 9 vary by use?

10:13 10 A. It does not vary by use because it uses any and all  
10:13 11 use.

10:13 12 Q. So the licensee pays a single lump sum regardless of  
10:13 13 how much or how little the licensee uses the licensed patents,  
10:13 14 correct?

10:13 15 A. That is correct.

10:13 16 Q. So if the licensee decides not to use the licensed  
10:14 17 patents at all, it doesn't get a discount, right?

10:14 18 A. That is correct.

10:14 19 Q. And if it decides to use the licensed patents a lot,  
10:14 20 it doesn't have to pay more, correct?

10:14 21 A. That is correct.

10:14 22 Q. So even if the licensee incorporates the licensed  
10:14 23 technology, the licensed patents in its products, and turns out  
10:14 24 it's valuable, very valuable for the licensee, and they wind up  
10:14 25 selling many more products as a result of incorporating that

10:14 1 licensed technology in their products, they're not going to pay  
10:14 2 any more for that license than they paid initially because it  
10:14 3 was a lump sum, correct?

10:14 4 A. That is correct.

10:14 5 Q. And you're proposing a lump sum in this case,  
10:14 6 correct?

10:14 7 A. Yes.

10:14 8 Q. But do you agree that for a proper damages analysis,  
10:15 9 the jury finds in VLSI's favor on liability, the jury will have  
10:15 10 to award no more but also no less than the value that VLSI's  
10:15 11 patented inventions have provided to Intel. Would you agree  
10:15 12 with that?

10:15 13 A. Yes.

10:15 14 Q. Now, you testified that -- I believe you said you  
10:15 15 couldn't recall any case in your years at IBM in which there  
10:15 16 was not a lump sum structure for a license agreement. Do you  
10:15 17 recall that testimony?

10:15 18 A. My testimony was that I had not done any.

10:16 19 Q. Okay. Now -- and you can't recall an example of a  
10:16 20 running royalty license at IBM in the semiconductor space,  
10:16 21 correct?

10:16 22 A. Correct.

10:16 23 Q. Now, IBM did have a patent license and policy under  
10:16 24 which it would license one patent to a company for a running  
10:16 25 royalty of 1 percent up to a running royalty of 5 percent on

10:16 1 the overall selling price of the licensed products, correct?

10:16 2 A. Specifically --

10:16 3 Q. Can you answer that yes or no?

10:16 4 A. Yes. And I --

10:16 5 Q. Okay. So --

10:16 6 A. -- can explain.

10:16 7 THE COURT: Doctor, we don't --

10:16 8 THE WITNESS: Okay.

10:16 9 THE COURT: Your lawyers get to have the explanation if  
10:16 10 they'd like it.

10:16 11 BY MR. HEINRICH:

10:16 12 Q. But I think I'm going to help you out because what  
10:17 13 you told me at your deposition was that --

10:17 14 THE COURT: Counsel, just ask the question.

10:17 15 BY MR. HEINRICH:

10:17 16 Q. Okay. So it's your recollection that that IBM  
10:17 17 running royalty policy only applied to IBM PC clones; is that  
10:17 18 right?

10:17 19 A. Yes.

10:17 20 Q. And you couldn't recall any instance at IBM where  
10:17 21 that 1 percent policy applied to semiconductors. Is that -- is  
10:17 22 that your testimony?

10:17 23 A. Yes.

10:17 24 Q. Now, I want to take you back to 1997. Okay? In 1997  
10:17 25 you were responsible for all licensing of IBM's patents to

10:17 1 semiconductor companies, correct?

10:17 2 A. Yes.

10:17 3 Q. And you would have been aware of all of IBM's

10:18 4 licenses to semiconductor companies, correct?

10:18 5 A. Yes.

10:18 6 Q. All IBM licenses for semiconductor products, in 1997

10:18 7 you would have been aware of all such licenses, right?

10:18 8 A. Yes.

10:18 9 Q. Now, you recall a license agreement in 1997 that IBM

10:18 10 entered into with a company called JDS Uniphase?

10:18 11 A. No.

10:18 12 Q. Well, let me see if I can refresh your recollection.

10:18 13 Do you recall that IBM licensed JDS Uniphase for products that

10:18 14 are called semiconductor laser chips?

10:18 15 A. I do not recall that.

10:18 16 Q. You don't recall this being an instance where, in

10:18 17 fact, IBM licensed this other company to IBM patents for

10:19 18 semiconductor chips at a running royalty of 1 percent per

10:19 19 patent up to 5 percent on the sale of these semiconductor

10:19 20 products?

10:19 21 A. I do not recall that.

10:19 22 Q. Well, maybe I can help you out with the licensed

10:19 23 patents.

10:19 24 So I'll give you an example. Do you recall a patent -- an

10:19 25 IBM patent that was the '535 patent titled "semiconductor laser

10:19 1 diode deposited on a structured substrate surface." Does that  
10:19 2 ring a bell?

10:19 3 A. No.

10:19 4 Q. And you don't recall that patent being licensed to  
10:19 5 Uniphase at a running royalty?

10:19 6 A. No.

10:19 7 Q. Now, are you familiar with a treatise drafting  
10:19 8 technology patent license agreements?

10:20 9 A. No.

10:20 10 Q. Would it surprise you that that treatise has a 1997  
10:20 11 agreement between IBM and JDS Uniphase that was, in fact, a  
10:20 12 running royalty agreement for a semiconductor chip?

10:20 13 A. Would it surprise me?

10:20 14 Q. Yes.

10:20 15 A. No.

10:20 16 Q. Now, it's hard for us to test your memory of these  
10:20 17 past IBM license agreements because almost all of them are  
10:20 18 confidential, correct?

10:20 19 A. Yes.

10:20 20 Q. So there's really no way for us to determine just how  
10:20 21 many IBM licenses in the semiconductor space there have been  
10:20 22 for a running royalty instead of a lump sum; is that fair?

10:21 23 A. That is fair.

10:21 24 Q. Now, when you were working at IBM, IBM had for years  
10:21 25 over a billion dollars in patent licensing revenue, correct?

10:21 1 A. No.

10:21 2 Q. Well, so how about over the course of your time?

10:21 3 Well over a billion dollars in licensing revenue, correct?

10:21 4 A. Over 22 years, it would have been greater than 1  
10:21 5 billion. Yes.

10:21 6 Q. And there were some years where IBM generated more in  
10:21 7 patent licensing revenue than it did in its operating  
10:21 8 divisions?

10:21 9 A. No.

10:21 10 Q. Now, you testified about some transactions that you  
10:21 11 think are comparable to the reasonable royalty that would have  
10:21 12 been negotiated in this case, correct?

10:22 13 A. Yes.

10:22 14 Q. Now, only three of those transactions involve the  
10:22 15 agreements and negotiations and purchases you pointed out, only  
10:22 16 three of them actually involved the '373 patent or the '759  
10:22 17 patent, correct?

10:22 18 A. Yes.

10:22 19 MR. HEINRICH: So can we pull up Mr. Huston's Slide 23, so  
10:22 20 DDX-13.23.

10:22 21 MR. MUELLER: Your Honor, I think we have to seal the  
10:22 22 courtroom for VLSI confidential.

10:22 23 THE COURT: Do you want the courtroom sealed?

10:22 24 MR. HEINRICH: Yes. Yes.

10:22 25 THE COURT: Then we'll go off the public record.

10:22 1 (Sealed proceedings.)

10:22 2 THE COURT: Can we go back on the public record?

10:52 3 MR. HEINRICH: Excuse me?

10:52 4 THE COURT: Can we go back on the public record?

10:52 5 MR. HEINRICH: Oh, yes. Yes.

10:52 6 THE COURT: And, Mr. Mueller, you can tell me if we have

10:52 7 to go off of the public record, but I just wanted to get us

10:52 8 started on it unless you need it.

10:52 9 MR. MUELLER: And, actually, I think I can stay on the  
10:52 10 public record the entire time, but if we could just maybe keep  
10:52 11 the monitors off.

10:52 12 THE COURT: That would be fine. We'll try to do it that  
10:52 13 way.

10:52 14 REDIRECT EXAMINATION

10:52 15 BY MR. MUELLER:

10:52 16 Q. I want to pick up right where we left off. You were  
10:52 17 asked about some agreements that Intel entered into to settle  
10:52 18 certain litigations, right?

10:52 19 A. Yes.

10:52 20 Q. I'm not going to ask you about the specific amounts  
10:52 21 because we're on the public record, but I just want to be  
10:52 22 really clear about this. Were any of those agreements for two  
10:53 23 patents?

10:53 24 A. No.

10:53 25 Q. One of the agreements we heard about, I'm not going

10:53 1 to give the name of it, but it was the very last one you were  
10:53 2 asked about. It starts with an N. That covered about 1,000  
10:53 3 patents, didn't it?

10:53 4 A. More than 1,000.

10:53 5 Q. The other agreement, hundreds of patents, right?

10:53 6 A. Correct.

10:53 7 Q. Did you see any agreement inside of litigation or  
10:53 8 outside of litigation in this case, out of everything you've  
10:53 9 reviewed, in which two patents were subject to a price of  
10:53 10 billions of dollars?

10:53 11 A. Never.

10:53 12 Q. Have you ever heard of such a thing in your entire  
10:53 13 career?

10:53 14 A. No.

10:53 15 Q. Now, you were asked some questions about the use of  
10:53 16 patents and how that might relate to a hypothetical  
10:53 17 negotiation. Do you recall those questions?

10:53 18 A. Yes.

10:53 19 Q. And the suggestion was the more you use something,  
10:53 20 the more you should pay, right?

10:53 21 A. Yes.

10:53 22 Q. So I want to explore that in the context of  
10:53 23 licensing. You have licensed patents for many decades, right?

10:53 24 A. Correct.

10:53 25 Q. Two decades at least, right?

10:53 1 A. Yes.

10:53 2 Q. Okay. And did you consider this issue of use in your  
10:54 3 own negotiations?

10:54 4 A. I considered the issue of use, but in all cases, we  
10:54 5 would end up doing any and all use. So it would be for  
10:54 6 anything.

10:54 7 MR. MUELLER: Now, let's pull up on the -- on the  
10:54 8 screen -- but not the public monitors, just the screen for the  
10:54 9 ladies and gentlemen of the jury -- DDX-13.23.

10:54 10 BY MR. MUELLER:

10:54 11 Q. These are the prior sales of the asserted patents,  
10:54 12 right?

10:54 13 A. Yes.

10:54 14 Q. So the patents are actually being sold; is that  
10:54 15 correct, sir?

10:54 16 A. That is correct.

10:54 17 Q. And how many times could the new owners use them?

10:54 18 A. The new owners could use these patents as much or as  
10:54 19 little as they wanted. They could use them for any and all of  
10:54 20 their products.

10:54 21 Q. They can use them once. They could use them a  
10:54 22 million times. They could use them a billion times. They  
10:54 23 could use them a trillion times; isn't that right?

10:54 24 A. That is correct.

10:54 25 Q. And those are the prices that were paid?

10:54 1 A. Yes.

10:54 2 Q. Now, this reflects basic common sense. If I'm  
10:54 3 selling a house, do I have to know what the owner is going to  
10:54 4 use it for to set a price?

10:54 5 A. No.

10:54 6 Q. What if I'm selling a car? Do I have to know how  
10:54 7 often it's going to be driven to set a price for the car?

10:55 8 A. Of course not.

10:55 9 Q. And if I'm selling a patent, do I have to know  
10:55 10 exactly how many times it's going to be used to set a price for  
10:55 11 that patent?

10:55 12 A. No.

10:55 13 Q. And how did you deal with this issue over the years  
10:55 14 at IBM?

10:55 15 A. So when we would negotiate these kinds of licenses,  
10:55 16 we would recognize that we were going to be granting a complete  
10:55 17 usage of the patents for as much as the licensee would have,  
10:55 18 and we would price it in a way that would be acceptable to both  
10:55 19 sides for unlimited use.

10:55 20 Q. Now, did you ever negotiate with competitors of IBM?

10:55 21 A. Always.

10:55 22 Q. And did you assume that those competitors were going  
10:55 23 to use the patents you were licensing to them?

10:55 24 A. Yes.

10:55 25 Q. Did you take that into account in setting the prices?

10:55 1 A. Yes.

10:55 2 MR. MUELLER: Let's go to DDX-13.25.

10:55 3 BY MR. MUELLER:

10:55 4 Q. Here we have the prior comparable agreements that  
10:55 5 Intel struck with Freescale and NXP over the years. Do you see  
10:55 6 these, sir?

10:55 7 A. Yes.

10:55 8 Q. I'm not going to read the terms because we're on the  
10:55 9 public record. These were in one instance a purchase agreement  
10:56 10 and one instance a license, right?

10:56 11 A. Correct.

10:56 12 Q. How many times could Intel use the patents that it  
10:56 13 purchased or licensed under these agreements?

10:56 14 A. As much as they wanted for all of their products.

10:56 15 Q. Million times, billion times, trillion times?

10:56 16 A. Correct.

10:56 17 Q. Freescale, NXP, they were sophisticated parties,  
10:56 18 right?

10:56 19 A. Yes.

10:56 20 Q. And they struck these agreements for these amounts?

10:56 21 A. Correct.

10:56 22 Q. And they knew Intel could use these patents as much  
10:56 23 as they wanted?

10:56 24 A. Yes. That was fundamental.

10:56 25 MR. MUELLER: Next slide, DDX-13.38.

10:56 1 BY MR. MUELLER:

10:56 2 Q. These are the 18 agreements that you found comparable  
10:56 3 in this case; is that right, sir?

10:56 4 A. Yes.

10:56 5 Q. Under each and every one of these agreements, how  
10:56 6 many times could Intel use the patents that it was either  
10:56 7 purchasing or licensing?

10:56 8 A. As much as they wanted in all of their products.

10:56 9 Q. Billions, trillions. They could use as much as they  
10:56 10 wanted, right?

10:56 11 A. Correct.

10:56 12 Q. And those were the prices that were struck?

10:56 13 A. Yes.

10:56 14 Q. Now, you've identified 18 comparable license  
10:57 15 agreements. You've also identified comparable agreements for  
10:57 16 the prior owners. You've also identified prior sales  
10:57 17 agreements for these patents, right, sir?

10:57 18 A. Yes.

10:57 19 Q. Do you understand that in patent law there's this  
10:57 20 concept called the "comparable license agreement"?

10:57 21 A. Yes.

10:57 22 Q. And that's relevant to a hypothetical negotiation?

10:57 23 A. Yes.

10:57 24 Q. How many comparable agreements did Dr. Sullivan and  
10:57 25 VLSI identify in this case?

10:57 1 A. Zero.

10:57 2 Q. Now, you were asked a couple questions about  
10:57 3 Dr. Colwell and some work that he had done. Do you recall  
10:57 4 that?

10:57 5 A. Yes.

10:57 6 Q. On the subject of technological comparability?

10:57 7 A. Yes.

10:57 8 Q. Now, you, sir, are an engineer with a master's  
10:57 9 degree, correct?

10:57 10 A. Correct.

10:57 11 Q. You worked at IBM as an engineer for 11 years?

10:57 12 A. Correct.

10:57 13 Q. Did you yourself do an independent technological  
10:57 14 comparability analysis in this case?

10:57 15 A. Yes. I did.

10:57 16 Q. And are the opinions you gave the jury based on your  
10:57 17 own independent work?

10:57 18 A. Yes.

10:57 19 Q. Last few questions. You were asked about the  
10:58 20 financial terms of some of these agreements and the suggestion  
10:58 21 was made: Well, those were just numbers that the accountants  
10:58 22 for folks like the prior owners had come up with, right?

10:58 23 A. Correct.

10:58 24 Q. Have you taken the accountants at their word and  
10:58 25 assumed they weren't lying?

10:58 1 A. I have.

10:58 2 Q. And have you based your analysis on the accounting  
10:58 3 valuations given to these patents in the actual agreements?

10:58 4 A. Yes.

10:58 5 Q. Now, you've observed all of the testimony in this  
10:58 6 case, correct, sir?

10:58 7 A. Yes.

10:58 8 Q. And you know the only witness who's taken the stand  
10:58 9 in this case to say there's been any use by Intel of these two  
10:58 10 patents is Dr. Conte, right?

10:58 11 A. Correct.

10:58 12 Q. If the ladies and gentlemen of the jury decide that  
10:58 13 Dr. Conte was wrong, that there is no infringement, then what  
10:58 14 does Intel owe for these two patents?

10:58 15 A. Exactly zero.

10:58 16 Q. And in the hypothetical world where Intel is using  
10:58 17 them, do you think that in that hypothetical world they would  
10:58 18 pay a running royalty or a lump sum?

10:58 19 A. A lump sum.

10:58 20 Q. But if there's no use at all, the number is?

10:59 21 A. Zero.

10:59 22 Q. Thank you, sir.

10:59 23 MR. MUELLER: I have no further questions.

10:59 24 MR. HEINRICH: Can we pull up DDX-13.38?

10:59 25 RECROSS-EXAMINATION

10:59 1 BY MR. HEINRICH:

10:59 2 Q. So, Mr. Huston, you pointed to this slide a moment  
10:59 3 ago and said that Intel could use the patents licensed under  
10:59 4 these agreements in billions of products, right?

10:59 5 A. Or more.

10:59 6 Q. And yet you didn't point the ladies and gentlemen of  
10:59 7 the jury to even one single Intel product covered by the  
10:59 8 claimed invention of any of these licensed patents, correct?

11:00 9 A. Correct.

11:00 10 Q. Now, let's talk about numbers of patents and  
11:00 11 royalties for numbers of patents.

11:00 12 MR. HEINRICH: And let's pull back up PTX-212.

11:00 13 BY MR. HEINRICH:

11:00 14 Q. Under the IBM licensing practices that we talked  
11:00 15 about a few moments ago, IBM would license a single patent for  
11:00 16 1 percent, correct?

11:00 17 A. For PC clones. Yes.

11:00 18 Q. And for two patents, they would license for a  
11:00 19 2 percent running royalty on sales, correct?

11:00 20 A. For PC clones. Yes.

11:00 21 Q. And 2 percent -- well, even 1 percent is much more  
11:00 22 than what Dr. Sullivan is proposing, correct?

11:00 23 A. Yes.

11:00 24 MR. HEINRICH: No further questions. Thank you very much.

11:00 25 THE COURT: You may step down, sir.

11:00 1 Mr. Lee?

11:01 2 MR. LEE: Your Honor, ladies and gentlemen of the jury,

11:01 3 Intel rests.

11:01 4 We would renew our motions, but we can do that at the

11:01 5 break so we don't waste the jury's time.

11:01 6 THE COURT: Very good.

11:01 7 Mr. Chu?

11:01 8 MR. CHU: Thank you, Your Honor. And at an appropriate

11:01 9 time we will have some motions to make as well. And then I

11:01 10 will turn the next stage of the trial over to one of my

11:01 11 colleagues.

11:01 12 THE COURT: And, Mr. Lee, you approve of waiting on those

11:01 13 motions as well?

11:01 14 MR. LEE: I'm sorry, Your Honor?

11:01 15 THE COURT: You approve on us waiting on Mr. Chu's motions

11:01 16 as well?

11:01 17 MR. LEE: Yes.

11:01 18 THE COURT: Okay.

11:01 19 MR. LEE: I think we can make them --

11:01 20 THE COURT: I just wanted to -- I need --

11:01 21 MR. LEE: We can follow the same procedure.

11:01 22 THE COURT: Sure. I just needed it on the record.

11:01 23 MR. LEE: That's perfectly fine.

11:01 24 THE COURT: Yes.

11:01 25 MR. HEINRICH: VLSI calls its next witness Professor Tom

11:01 1 Conte.

2 THE COURT: Dr. Conte, if you will recall that you are  
3 under oath.

4 MR. HEINRICH: May I proceed?

5 THE COURT: Yes, please.

6 DIRECT EXAMINATION

7 BY MR. HEINRICH:

11:02 8 Q. Welcome back, Professor Conte.

11:02 9 A. Thank you.

11:02 10 Q. Were you present here in court on Friday when  
11:02 11 Dr. Grunfeld [sic] testified regarding the validity of the '759  
11:02 12 patent?

11:02 13 A. Dr. Grunwald, I think you mean.

11:02 14 Q. Oh, sorry. Dr. Grunwald, I apologize.

11:02 15 Were you here for that?

11:02 16 A. Yes. I was.

11:02 17 Q. And can you summarize your opinions after carefully  
11:03 18 considering his testimony?

11:03 19 A. Yes. I'd be happy to. I prepared a slide on this.

11:03 20 There it is.

11:03 21 Okay. So I listened to Dr. Grunwald's opinions. And I  
11:03 22 concluded, when he described Yonah, that Yonah is the old  
11:03 23 approach that I talked about, and I'll talk a little bit more  
11:03 24 about that. And the '759 patent is the new approach, and I'll  
11:03 25 talk some more about that.

11:03 1 I also listened, and I am still convinced that the U.S.  
11:03 2 Patent Office thoroughly examined and correctly issued the '759  
11:03 3 patent. He did not provide any clear and convincing evidence  
11:03 4 of invalidity. Definitely nothing --

11:03 5 MR. LEE: Your Honor, I object to the (inaudible) --

11:03 6 THE REPORTER: Counsel, I can't hear you.

11:03 7 THE COURT: I can't hear you, Mr. Lee.

11:03 8 MR. LEE: It's not his job to decide what clear and  
11:03 9 convincing evidence is. That's the jury's job. He gets to  
11:03 10 just put his testimony in.

11:03 11 THE COURT: I'll sustain that.

11:03 12 If you could re-ask the question.

11:04 13 BY MR. HEINRICH:

11:04 14 Q. So in your opinion, is there clear and convincing  
11:04 15 evidence of invalidity?

11:04 16 MR. LEE: I object.

11:04 17 THE COURT: I'll sustain.

11:04 18 BY MR. HEINRICH:

11:04 19 Q. What's your opinion on the validity of the '759  
11:04 20 patent?

11:04 21 A. I believe it's valid. I know that if it were  
11:04 22 invalid, what would happen would be you're taking away a patent  
11:04 23 owner's rights. You're taking away their property. I own 40  
11:04 24 patents, so I understand what that means. And the '759 is  
11:04 25 valid.

11:04 1 Q. Okay. So can you remind us what Yonah's approach was  
11:04 2 for speed control?

11:04 3 A. Sure. So -- and this is what I showed last Tuesday.  
11:04 4 So if you remember, it's the operating system in Yonah that  
11:04 5 determines how to what they say "step the speed," right? So it  
11:04 6 controls the speed. It's what makes the decisions.

11:04 7 And it has to wait in line -- I mean, those speed  
11:04 8 instructions have to wait in line after all your programs are  
11:05 9 running, right?

11:05 10 So it ends up -- if you were to put in more instructions,  
11:05 11 that would be "too intrusive." And because it takes this long  
11:05 12 time, it's really slow.

11:05 13 Q. And why do you have too intrusive in quotes there?

11:05 14 A. That's what Dr. Rotem described the old approach as  
11:05 15 in his IEEE paper.

11:05 16 Q. And just remind us, what does Intel call this old  
11:05 17 approach?

11:05 18 A. They call it SpeedStep.

11:05 19 Q. And was the '759 patent's approach to speed control  
11:05 20 the same or different than the Yonah old approach?

11:05 21 A. It was different. Okay. So the '759 teaches that  
11:05 22 you have this programmable clock controller with an embedded  
11:05 23 computer program. That's what makes the control decisions.  
11:05 24 That's what changes the speed. And it's dedicated, right?  
11:05 25 It's this computer-in-a-computer, and it can do it over a

11:05 1 thousand times faster.

11:05 2 Q. Now, in the Yonah SpeedStep approach, what was making  
11:06 3 the decisions to change speed?

11:06 4 A. In Yonah it was the operating system that did that.

11:06 5 Q. And did we get a confirmation of that at trial?

11:06 6 A. Yes. We did.

11:06 7 Q. So let's pull up -- well, can you summarize the  
11:06 8 testimony that you recall on that?

11:06 9 A. Yeah. I recall -- actually, here it is. Dr. Rotem  
11:06 10 testified, "So the OS," the operating system, "power manager  
11:06 11 tracks the utilization of the core. And based on that  
11:06 12 utilization, it makes an explicit decision."

11:06 13 So it's the operating system making the calls, making the  
11:06 14 decisions.

11:06 15 Q. Now, in the '759 patent, where is the operating  
11:06 16 system running?

11:06 17 A. In the '759 patent, it's running on the cores.

11:06 18 Q. Now, what's the role of the cores in making the speed  
11:07 19 changes in the '759 approach?

11:07 20 A. All they do is they provide requests.

11:07 21 MR. HEINRICH: So let's pull up PTX-2, the '759 patent,  
11:07 22 and let's go to Claim 14, Element B.

11:07 23 BY MR. HEINRICH:

11:07 24 Q. And what does the patent itself tell us about the  
11:07 25 role of the cores or the first master device in this system?

11:07 1 A. Yeah. Here it is. This is one of the claims, and it  
11:07 2 says, "The first master device is configured to provide a  
11:07 3 request." That's what it does. It provides a request to that  
11:07 4 programmable clock controller, that embedded  
11:07 5 computer-in-a-computer.

11:07 6 Q. And under this '759 approach, what component is  
11:07 7 actually making the decision to increase speed?

11:07 8 A. It's that programmable clock controller.

11:07 9 Q. So let's turn to this Column 5 at Lines 55 to 56, the  
11:08 10 same patent, the '759. And what does the '759 patent say about  
11:08 11 this decision to increase speed?

11:08 12 A. So here I'll read it out. It says, "Moving to  
11:08 13 Decision Step 204, the controller determines whether to enable  
11:08 14 the request."

11:08 15 So it's the controller making the calls.

11:08 16 Q. And it references Decision Step 204.

11:08 17 MR. HEINRICH: And let's pull up Figure 2 of the patent to  
11:08 18 look at that step.

11:08 19 BY MR. HEINRICH:

11:08 20 Q. And what does the patent show us here in Figure 2?

11:08 21 A. All right. So this is some of what the programmable  
11:08 22 clock controller is doing. And you see it says, like in 202,  
11:08 23 "receive a request to increase speed." And then 204 is that  
11:08 24 decision block. We talked about this on Tuesday. And it  
11:08 25 decides whether or not to listen to that request and -- and

11:08 1 speed things up.

11:08 2 Q. Now, does this -- this method, using a dedicated  
11:09 3 computer within a controller, have an impact on how fast the  
11:09 4 speed control changes can be made?

11:09 5 A. Yes. It does. It's much, much faster.

11:09 6 MR. HEINRICH: So, Mr. Simmons, let's bring up D-273 and  
11:09 7 go to Page 5 of 60.

11:09 8 BY MR. HEINRICH:

11:09 9 Q. And do you recall Dr. Grunwald's testimony about this  
11:09 10 slide during cross-examination?

11:09 11 A. I do.

11:09 12 Q. So let's highlight the -- the line here that says,  
11:09 13 "300 to 1,000 milliseconds." And what is -- first of all, is  
11:09 14 this document about the Yonah SpeedStep approach?

11:09 15 A. Yeah. You can see right there, it says Yonah.

11:09 16 Q. And what does this 300 to 1,000 millisecond reference  
11:09 17 mean?

11:10 18 A. It means that at most the operating system can make a  
11:10 19 speed change at about a third of a second. Sometimes it's  
11:10 20 saying it's as slow as a second.

11:10 21 Q. Now, let's contrast that to the '759 approach.

11:10 22 MR. HEINRICH: Can we go back to PTX-2, the '759 patent,  
11:10 23 and go to Column 4, at Lines 8 through 10.

11:10 24 BY MR. HEINRICH:

11:10 25 Q. And what does the patent say here?

11:10 1 A. Yeah. So look here, it says, "The predefined time  
11:10 2 interval may vary from one microsecond to several  
11:10 3 milliseconds."

11:10 4 Q. So that's -- that's much faster than the Yonah  
11:10 5 approach?

11:10 6 A. Over 1,000 times.

11:10 7 Q. And has Intel itself benefitted from the new approach  
11:10 8 that is described and claimed in the '759 patent?

11:10 9 A. Yes, they have. Greatly.

11:10 10 Q. And what does Intel call its implementation of the  
11:10 11 '759 patent?

11:10 12 A. They call it Speed Shift.

11:10 13 Q. Okay. So let's go to your opinion on validity.

11:10 14 And you understand that Intel claims that the '759 patent  
11:11 15 is anticipated by Yonah?

11:11 16 A. I do.

11:11 17 Q. And what tests for anticipation did you apply in your  
11:11 18 analysis?

11:11 19 A. Let's go back to my slides, if we could.

11:11 20 Nope.

11:11 21 Q. Let's go -- okay.

11:11 22 MR. HEINRICH: Let's go to the next slide.

11:11 23 BY THE WITNESS:

11:11 24 A. There we go.

11:11 25 So I applied this test. "For anticipation, Intel must

11:11 1 prove by clear and convincing evidence that all of the  
11:11 2 requirements of the claim are present in a single piece of  
11:11 3 prior art."

11:11 4 BY MR. HEINRICH:

11:11 5 Q. And is that test met, in your opinion?

11:11 6 A. No. I'll show you not only are -- not all of the  
11:11 7 elements of the claim present in Yonah, but what Dr. Grunwald  
11:11 8 pointed to was not a single piece of prior art.

11:11 9 Q. Okay.

11:11 10 MR. HEINRICH: So let's pull up Claim 14.

11:11 11 BY MR. HEINRICH:

11:12 12 Q. And before you get into the details, can you identify  
11:12 13 for us what claim element or claim elements you believe are  
11:12 14 missing from Yonah?

11:12 15 A. Yes. So I think we probably all have this memorized  
11:12 16 by now, don't we? So I'll go over it -- and "Yonah does not  
11:12 17 have this programmable clock controller having an embedded  
11:12 18 computer program therein. The program including instructions  
11:12 19 to and D, E and F." Okay. So I'll go over that. It doesn't  
11:12 20 at least have that.

11:12 21 Q. Okay.

11:12 22 MR. HEINRICH: So, Mr. Simmons, let's go to the trial  
11:12 23 transcript and pull up Page 1386 and blow up Lines 16 through  
11:12 24 24.

11:12 25 BY MR. HEINRICH:

11:12 1 Q. Who's testifying here?

11:12 2 A. This is Dr. Grunwald.

11:12 3 Q. And what is Dr. Grunwald saying here, first about the  
11:12 4 old legacy Yonah processor?

11:12 5 A. He said it -- it does not have a PCU. Yonah did not  
11:12 6 have a PCU.

11:12 7 Q. Do you agree with that?

11:12 8 A. Yes.

11:12 9 Q. And what about the Skylake processors?

11:12 10 A. He said that Skylake does have a PCU.

11:13 11 Q. And does Dr. Grunwald contest that the Skylake and  
11:13 12 Lake processors' PCU is, in fact, a programmable clock  
11:13 13 controller?

11:13 14 A. No. He does not. He agrees with that.

11:13 15 Q. Okay. Now, is the claimed programmable clock  
11:13 16 controller a hardware controller or a software controller?

11:13 17 A. It's a hardware controller.

11:13 18 Q. And after Yonah was introduced, did Intel actually  
11:13 19 add this hardware controller, the PCU, with the Speed Shift  
11:13 20 functionality to its Lake processors?

11:13 21 A. It did.

11:13 22 Q. Could a person of skill have taken the Yonah approach  
11:13 23 and come up with this Speed Shift approach using the '759  
11:13 24 technology without undue experimentation?

11:13 25 A. No. They could not have.

11:13 1 Q. And is there some real-world evidence of that?

11:14 2 A. Sure. Intel, in fact, calls -- if you remember, they  
11:14 3 call Speed Shift a revolutionary new approach.

11:14 4 Q. And how long did it take Intel to introduce its first  
11:14 5 processor with Speed Shift after Yonah was introduced?

11:14 6 A. Well, let's see. Skylake was introduced in 2015. I  
11:14 7 think Yonah was introduced in 2010 or '11. I think it's 2011.

11:14 8 Q. Okay. So let's talk in more detail about  
11:14 9 Dr. Grunwald's anticipation analysis.

11:14 10 A. Okay.

11:14 11 Q. What did he point to as --

11:14 12 MR. HEINRICH: Well, you know, actually, let's go to --  
11:14 13 let's go to the next slide.

11:14 14 BY THE WITNESS:

11:14 15 A. Okay.

11:14 16 BY MR. HEINRICH:

11:14 17 Q. And what did Dr. Grunwald point to as Yonah's  
11:14 18 programmable clock controller?

11:14 19 A. Okay. Well, first, this -- this -- I was going to go  
11:15 20 and walk through the elements that are missing. I had a nice  
11:15 21 little graphic. We'll see that again.

11:15 22 What he pointed to was this piece here called the power  
11:15 23 management logic.

11:15 24 Q. And is the power management logic a programmable  
11:15 25 clock controller with an embedded computer program, in your --

11:15 1 in your opinion?

11:15 2 A. No. Well, first, logic is kind of computer  
11:15 3 engineering-ese for simple circuits. And in this case, there's  
11:15 4 no OS -- first, let me back off.

11:15 5 Simple circuits, let's go back there. The OS controls  
11:15 6 this thing. The OS is calling the shots. We already talked  
11:15 7 about that. This is not programmable. It has no embedded  
11:15 8 computer instructions in it.

11:15 9 Q. Is this power management logic that Dr. Grunwald is  
11:15 10 pointing to, is this a computer-within-a-computer like  
11:15 11 Mr. Henson conceived?

11:15 12 A. No. Not at all.

11:16 13 Q. Let's go through some of Dr. Grunwald's other slides  
11:16 14 now.

11:16 15 MR. HEINRICH: So can you -- Mr. Simmons, can you pull up  
11:16 16 DDX-10.72? And let's blow up the -- the figure on the left.

11:16 17 BY MR. HEINRICH:

11:16 18 Q. And the -- Professor Conte, is this a slide that  
11:16 19 Dr. Grunwald presented during his direct testimony to show that  
11:16 20 the Yonah controller was programmable?

11:16 21 A. Yeah. So I want you to understand that engineers  
11:16 22 sometimes use programmable just to mean that you can configure  
11:16 23 it. And here it's talking about "with programmable five US,"  
11:16 24 that's five microsecond delay per step.

11:16 25 And the next one is "wait five micro seconds until

11:16 1 unlocked, programmable." "Wait until five microseconds until  
11:16 2 unlocked, programmable." "With programmable, five-microsecond  
11:16 3 delay."

11:16 4 This is as programmable as a kitchen timer. Okay? And,  
11:17 5 ladies and gentlemen, if you recall when I talked about how a  
11:17 6 program's a step of -- a set of instructions, like you do to  
11:17 7 make a cake, this is like saying that your kitchen timer could  
11:17 8 make a cake.

11:17 9 Q. Now, does the use of the word "programmable" standing  
11:17 10 alone mean that Yonah had a programmable clock controller with  
11:17 11 an embedded computer program?

11:17 12 A. No. Not at all.

11:17 13 Q. Did Yonah have an embedded computer program in the  
11:17 14 functionality that Dr. Grunwald was pointing to?

11:17 15 A. No. It did not.

11:17 16 MR. HEINRICH: Okay. So let's bring up DDX-10.70. And,  
11:17 17 again, blow up the image on the left.

11:17 18 BY MR. HEINRICH:

11:17 19 Q. Professor Conte, did Yonah measure performance in a  
11:17 20 predefined time interval?

11:17 21 A. No. Yonah did not. The operating system did.

11:17 22 That's what this is talking about. It's the operating system  
11:18 23 that's doing that.

11:18 24 MR. HEINRICH: Let's go to Exhibit -- or Slide -- Mr. --  
11:18 25 Dr. Grunwald's Slide DDX-10.67.

11:18 1 BY MR. HEINRICH:

11:18 2 Q. And is this another image that he showed the jury  
11:18 3 during his testimony?

11:18 4 A. Yes. It is.

11:18 5 Q. And what do we see on the left here?

11:18 6 MR. HEINRICH: Let's blow that up again.

11:18 7 BY THE WITNESS:

11:18 8 A. This is the die photo of Yonah.

11:18 9 BY MR. HEINRICH:

11:18 10 Q. And is there a programmable clock controller here in  
11:18 11 the Yonah processor?

11:18 12 A. There is not.

11:18 13 Q. Okay.

11:18 14 MR. HEINRICH: And let's pull up DDX-10.71. And, again,  
11:18 15 blow up the diagram on the left, please.

11:18 16 BY MR. HEINRICH:

11:18 17 Q. And I think we heard some testimony about this figure  
11:18 18 earlier today. What do we -- what do we see here?

11:18 19 A. Well, I guess he used this because it looks pretty  
11:18 20 complicated, right? But there's really just a couple of  
11:18 21 registers, they go down to a bunch of adders and then they go  
11:19 22 into these latches, and that's about it. It's -- it's  
11:19 23 circuitry as complicated as what my sophomores would build.

11:19 24 Q. And there's a reference to a GV3 stepper here. Do  
11:19 25 you see that?

11:19 1 A. Yes. I do.

11:19 2 Q. Is that a programmable clock controller with embedded  
11:19 3 computer programs?

11:19 4 A. No. It's not.

11:19 5 Q. We heard some reference from Dr. Grunwald this  
11:19 6 morning about microcode. Do these GV3 steppers have in them  
11:19 7 microcode?

11:19 8 A. No. Microcode is in the core.

11:19 9 Microcode is not an embedded computer program.

11:19 10 Microcode is what -- it's what you use to decode the  
11:19 11 complicated instructions. It just tells you how to break them  
11:19 12 into simple instructions. That's all it is.

11:19 13 Q. So after reviewing Dr. Grunwald's evidence and  
11:19 14 listening carefully to his testimony, what's your conclusion  
11:20 15 about whether Yonah anticipates the '759 patent asserted  
11:20 16 claims?

11:20 17 A. Yonah does not anticipate the '759 patent asserted  
11:20 18 claims.

11:20 19 Q. And what are the missing elements, in your opinion?

11:20 20 A. Well, we have a slide. Yeah. This is that pretty  
11:20 21 slide I said.

11:20 22 So Yonah, as I showed, does not have a programmable clock  
11:20 23 controller having an embedded computer program therein. And  
11:20 24 that means --

11:20 25 THE COURT: Doctor, you need to slow down just a little

11:20 1 bit.

11:20 2 THE WITNESS: Yeah. Okay. I took too much coffee this  
11:20 3 morning.

11:20 4 THE COURT: Whatever it is, you're reading faster than I  
11:20 5 can listen. So just slow down a little bit.

11:20 6 THE WITNESS: My wife tells me that all the time, by the  
11:20 7 way.

11:20 8 BY THE WITNESS:

11:20 9 A. All right. So there's not that programmable clock  
11:20 10 controller with an embedded computer program. It doesn't  
11:20 11 receive the request provided by the -- by the cores. It  
11:20 12 doesn't do ENF either. And we'll talk about those later.

11:20 13 BY MR. HEINRICH:

11:21 14 Q. Okay. And does your analysis of Claim 14 apply to  
11:21 15 all of the asserted claims of the '759 patent?

11:21 16 A. Yes. It does.

11:21 17 Q. And so then what's your summary on Intel's  
11:21 18 anticipation defense?

11:21 19 A. Intel's anticipation defense is -- is full of holes.  
11:21 20 It didn't change that the '759 patent is valid.

11:21 21 Q. Okay. So let's switch gears a little bit and talk  
11:21 22 about your response to some of Intel's noninfringement  
11:21 23 arguments that we heard at trial last week.

11:21 24 A. Okay.

11:21 25 Q. Do you recall Dr. Grunwald's criticism of your

11:21 1 opinion about what the request is in the Lake processors?

11:21 2 A. I do.

11:21 3 Q. And just remind us, what is the request in the Lake  
11:21 4 processors?

11:21 5 A. So remember when you change the load, that's when the  
11:22 6 cores send this Core\_Active to the PCU. So it's the  
11:22 7 Core\_Active signal.

11:22 8 Q. Does Dr. Grunwald agree with that?

11:22 9 A. No. He doesn't.

11:22 10 MR. HEINRICH: So let's -- Mr. Simmons, if you could pull  
11:22 11 up the trial transcript at Page 1302 and blow up Line 25 and go  
11:22 12 on to the next page to Line 1.

11:22 13 BY MR. HEINRICH:

11:22 14 Q. And what does Dr. Grunwald testify here to?

11:22 15 A. So he was asked, "Is the Core\_Active signal an input  
11:22 16 into the autonomous algorithms that calculate the clock speed  
11:22 17 ratios?"

11:22 18 And he said, "No."

11:22 19 Q. And do you agree with that?

11:22 20 A. I do not agree with that.

11:22 21 Q. Now, where do these autonomous algorithms occur, or  
11:22 22 where are they running in the Lake processors?

11:22 23 A. They're running in the PCUs.

11:22 24 So if we go back to my slides. So this is actually

11:23 25 Dr. Grunwald's slide here and he shows, right here, here's the

11:23 1 autonomous algorithms. They're running in the PCU.

11:23 2 Q. And at the top here there's an arrow pointing to a  
11:23 3 little green folder and it says "Core C0 Residency." What's  
11:23 4 that?

11:23 5 A. If you remember on Tuesday, we talked about this.  
11:23 6 Inside the PCU are these counters. They're called C0 residency  
11:23 7 counters. And the way they work is that Core\_Active sends a  
11:23 8 signal to the PCU, and that starts these counters counting.

11:23 9 Q. Now, despite the way it's presented on Dr. Grunwald's  
11:23 10 slide, is the Core C0 Residency within the PCU?

11:23 11 A. Yes. It is.

11:23 12 Q. Okay. And is there a relationship between the Core  
11:23 13 C0 Residency and the Core\_Active requests?

11:23 14 A. There is. So let me take you to slide -- and I'll  
11:23 15 blow that up. And here's exactly what I said on Tuesday. The  
11:23 16 core sends Core\_Active signal and that starts this counter  
11:24 17 counting. And that's measured in this activity window we  
11:24 18 talked about.

11:24 19 Q. Is the Core\_Active then an input to the autonomous  
11:24 20 algorithms that calculate the speed of the cores?

11:24 21 A. Absolutely. In fact -- I'm sorry.

11:24 22 Q. Can you explain -- can you explain?

11:24 23 A. Yeah. I'd be happy to. I was trying to. Okay.

11:24 24 If you didn't have that signal to turn on the counters,  
11:24 25 the PCU would never know that the cores' load changed. It

11:24 1 would never change the speed of the cores due to loading.

11:24 2 Q. And there was some discussion on Friday and then  
11:24 3 again this morning about Dr. Grunwald's restaurant analogy.

11:24 4 Just to be clear, who was the one that raised this  
11:24 5 restaurant analogy?

11:24 6 A. Dr. Grunwald in his report raised that.

11:24 7 Q. Okay. So let's turn to Dr. Grunwald's argument  
11:24 8 regarding the clock elements. So these are Elements [E] and  
11:25 9 [F]. Do you recall his testimony about that?

11:25 10 A. I do.

11:25 11 MR. HEINRICH: So let's -- Mr. Simmons, let's pull up  
11:25 12 DDX-10.52.

11:25 13 BY MR. HEINRICH:

11:25 14 Q. And this is another one of Dr. Grunwald's slides.  
11:25 15 What is Dr. Grunwald trying to argue through his slide here?

11:25 16 A. He's trying to argue that the clock frequency of the  
11:25 17 bus and the clock frequency of the second master are required  
11:25 18 to be the same in the '759 patent.

11:25 19 Q. So in other words, he's arguing that Elements [E] and  
11:25 20 [F] require controlling the second master and the bus so that  
11:25 21 they're operating at the same frequency?

11:25 22 A. Yes.

11:25 23 Q. Okay. So let's take another look at the claim  
11:25 24 elements themselves.

11:25 25 MR. HEINRICH: So, Mr. Simmons, can you bring up PTX-2,

11:25 1 the '759 patent, and blow up Elements [E] and [F] of Claim 14?

11:26 2 Okay. Thank you.

11:26 3 BY MR. HEINRICH:

11:26 4 Q. So would a person of skill, reading Elements [E] and  
11:26 5 [F], conclude that these elements require setting the second  
11:26 6 master and the bus to the same ultimate frequency?

11:26 7 A. No. So if you step back and just think about it, if  
11:26 8 the patentee wanted that, the patentee wouldn't have put in two  
11:26 9 elements. The patentee would have just said, "Provide the  
11:26 10 high-speed clock to the second master in the bus." Much  
11:27 11 simpler language.

11:27 12 Instead the patentee said, "Provide the clock frequency of  
11:27 13 the high-speed clock as an output to control a clock frequency  
11:27 14 of a second master device."

11:27 15 And furthermore, said, "Provide the clock frequency of the  
11:27 16 high-speed clock as an output to control," and used even  
11:27 17 different words, "variable clock frequency of the bus."

11:27 18 And so to an engineer that's why -- that's who he was  
11:27 19 writing to. To an engineer, that means that these are  
11:27 20 different frequencies that are going to the bus in the second  
11:27 21 master.

11:27 22 MR. HEINRICH: So, Mr. Simmons, let's pull up PTX-3588 and  
11:27 23 go to Page 15 and then blow up the top half of that figure.

11:27 24 BY MR. HEINRICH:

11:27 25 Q. Do you recall this figure that Dr. Grunwald was

11:27 1 questioned about during his cross-examination?

11:27 2 A. Yes. And I think y'all probably remember me using  
11:27 3 this on Tuesday, too, right?

11:27 4 Q. First, what figure is this?

11:28 5 A. This is the Skylake client clock circuit.

11:28 6 Q. Now, how many -- is there a high-speed clock shown  
11:28 7 here?

11:28 8 A. Yes. That's BCLK.

11:28 9 Q. And how many high speed clocks are shown in this  
11:28 10 clock circuit?

11:28 11 A. One.

11:28 12 Q. So does that mean that the resulting frequencies have  
11:28 13 to be the same?

11:28 14 A. No. You see what happens, like I explained, is  
11:28 15 that's an output that goes into these PLLs. Remember those?  
11:28 16 Those are used to further adjust that clock to deliver a clock  
11:28 17 to the core. There's CPLL, that delivers the clock to the  
11:28 18 core. And CLR PLL, that takes that, that further adjusts it  
11:28 19 and delivers that to the bus.

11:28 20 Q. So in the Lake processors, the output of the  
11:28 21 high-speed clock is further adjusted by the PLLs and then  
11:28 22 controls the cores and the bus?

11:29 23 A. That's right.

11:29 24 Q. Now, does the '759 patent say that the high-speed  
11:29 25 clock must directly control the various components on the chip

11:29 1 to the same frequencies?

11:29 2 A. No. It says in fact the opposite.

11:29 3 MR. HEINRICH: So let's bring up PTX-2 and pull up  
11:29 4 Column 4 at Lines 39 through 41.

11:29 5 BY MR. HEINRICH:

11:29 6 Q. What does the patent say, in fact?

11:29 7 A. This is saying that the clock that goes through the  
11:29 8 bus is further adjusted from that high-speed clock. It's  
11:29 9 saying exactly what I said the claim calls out.

11:29 10 Q. And how does that relate to Intel's Lake processors?

11:29 11 A. That matches what the PLLs do. That matches what the  
11:29 12 Intel Lake processors do.

11:29 13 Q. Okay.

11:29 14 MR. HEINRICH: Let's switch gears again and turn to the  
11:29 15 '373 patent.

11:29 16 BY MR. HEINRICH:

11:29 17 Q. Were you present in the courtroom when Dr. Sylvester  
11:30 18 testified last week?

11:30 19 A. I was.

11:30 20 Q. Did you hear him say that the word "sleep" doesn't  
11:30 21 appear in the '373 patent?

11:30 22 A. Yes. I recall that.

11:30 23 Q. Well, putting aside whether it uses that particular  
11:30 24 word, does the '373 patent in fact discuss the concept of a  
11:30 25 computer circuit going to sleep?

11:30 1 A. Yes. It does.

11:30 2 MR. HEINRICH: So let's pull up PTX-1, the '373 patent,  
11:30 3 and highlight Column 4, Lines 42 through 45.

11:30 4 BY MR. HEINRICH:

11:30 5 Q. And what does the '373 patent say here,  
11:30 6 Professor Conte?

11:30 7 A. Okay. So here it's talking about the minimum standby  
11:30 8 voltage for the memory array, minimum standby voltage, which  
11:30 9 represents a minimum operating voltage allowable for the memory  
11:30 10 array during standby. Standby means sleep.

11:30 11 Q. Okay. So let's turn to another issue that  
11:31 12 Dr. Sylvester raised.

11:31 13 Do you recall Dr. Sylvester saying that the  
11:31 14 RING\_RETENTION\_VOLTAGE, the value that you were telling us  
11:31 15 about early last week, that that didn't refer to C6 SRAM?

11:31 16 A. I do.

11:31 17 Q. And do you agree with that?

11:31 18 A. No. I don't. If you -- and I showed you this. If  
11:31 19 you looked at that ring domain, inside it is a memory that  
11:31 20 includes the C6 SRAM. And what's more, all the memory there is  
11:31 21 built out of the same identical bit cell circuitry.

11:31 22 Q. So in your opinion, does the RING\_RETENTION\_VOLTAGE,  
11:31 23 is that the minimum operating voltage for the C6 SRAM memory?

11:31 24 A. It is.

11:31 25 Q. Okay. Last issue for you, Professor Conte.

11:31 1 Do you recall on cross-examination that Dr. Sylvester was  
11:31 2 asked about his slide showing that RING\_RETENTION\_VOLTAGE in  
11:32 3 his analysis was actually higher than the voltage level of what  
11:32 4 I'll call VOLTAGE\_0?

11:32 5 A. Yes. I recall that.

11:32 6 MR. HEINRICH: And, Mr. Simmons, can we pull up that  
11:32 7 cross-examination slide?

11:32 8 BY MR. HEINRICH:

11:32 9 Q. And on the left side, is this from Dr. Sylvester's  
11:32 10 slide showing what I just indicated?

11:32 11 A. Yes. It is.

11:32 12 Q. Okay. And then on the right side, this is a figure  
11:32 13 that Mr. Chu used from D-505?

11:32 14 A. That's correct.

11:32 15 MR. HEINRICH: So let's actually pull up D-505 and go to  
11:32 16 Page 24.

11:32 17 BY MR. HEINRICH:

11:32 18 Q. And this is an actual Intel document?

11:32 19 A. This is an Intel document, indeed.

11:32 20 MR. HEINRICH: And yeah. If we can blow up the figures at  
11:33 21 the top there.

11:33 22 BY MR. HEINRICH:

11:33 23 Q. First, let's just start by referencing Vretention.

11:33 24 A. Right there? Yeah.

11:33 25 Q. Can you clear up what that dotted line is called

11:33 1 Vretention?

11:33 2 A. In this context that's the RING\_RETENTION\_VOLTAGE.

11:33 3 Q. And are you sure about that?

11:33 4 A. I am.

11:33 5 MR. LEE: Your Honor, this is confidential. Could we just  
11:33 6 turn off the public monitor?

11:33 7 THE COURT: Absolutely. Do you need it to -- Mr. Lee, do  
11:33 8 you want it to be taken off of the public feed as well, or do  
11:33 9 you just want it off the monitor?

11:33 10 MR. LEE: Only if he's going to start talking through the  
11:33 11 details. Generally it's fine.

11:33 12 THE COURT: Okay. We will make this so that only the only  
11:33 13 the jury and appropriate people can see the monitors.

11:33 14 BY MR. HEINRICH:

11:33 15 Q. Now, in this Intel document, where is the voltage V0  
11:33 16 shown in relationship to the RING\_RETENTION\_VOLTAGE level?

11:33 17 A. So that's that voltage. It's -- he gave the name as  
11:34 18 RING\_VOLTAGE\_VF\_0. If you don't mind, I'll just call it V0 to  
11:34 19 shorten things. But it's shown above the  
11:34 20 RING\_RETENTION\_VOLTAGE.

11:34 21 Q. So let's go back to the cross-examination slide. On  
11:34 22 the left, where is Dr. Sylvester showing this V0 or  
11:34 23 RING\_VF\_VOLTAGE\_0 in relationship to the  
11:34 24 RING\_RETENTION\_VOLTAGE?

11:34 25 A. He's showing it below. And -- now wait. Just think

11:34 1 about this. This is the voltage you need to remember, right?  
11:34 2 Why would you ever operate a circuit below the voltage you need  
11:34 3 for the memories to remember? That just can't be.

11:34 4 Q. So what's going on here then?

11:34 5 A. Well, here's what he's doing. Dr. Sullivan didn't  
11:35 6 compensate for something --

11:35 7 Q. Dr. Sylvester?

11:35 8 A. Did I say -- I get my Ss confused.

11:35 9 Dr. Sylvester didn't compensate for something called  
11:35 10 inverse temperature dependance.

11:35 11 Here's what that is. Imagine -- and I bet this will be  
11:35 12 easy to do. Imagine it's a really cold day, and you go out and  
11:35 13 you try to turn on your car and it won't crank over. What's  
11:35 14 happening is because it's so cold, the voltage on your battery  
11:35 15 is suppressed.

11:35 16 Well, Intel knows when their chips are cold that it has to  
11:35 17 boost a voltage in order to use it. And that's what they do  
11:35 18 with V<sub>0</sub> here.

11:35 19 Q. Okay. So we're going to talk about that in more  
11:35 20 detail. But first, did you hear Dr. Sylvester say that his  
11:35 21 values here that he used to generate this graph were based on  
11:35 22 4 million or so parts of fused data that he analyzed?

11:35 23 A. Yes. I heard that.

11:35 24 Q. And how did he measure those values?

11:35 25 A. He measured them with a script, which is a kind of

11:36 1 computer program.

11:36 2 Q. And I have on the document camera here Defendant  
11:36 3 Exhibit 1107. Is this --

11:36 4 A. Can you -- can you put that up? I can't see it.

11:36 5 Q. And --

11:36 6 A. I still can't see it. Okay. There it is. Yeah.

11:36 7 Q. And Dr. Sylvester was asked some questions --

11:36 8 MR. HEINRICH: And then, actually, we can go on the public  
11:36 9 record for this.

11:36 10 BY MR. HEINRICH:

11:36 11 Q. Is -- Dr. Sylvester was shown Exhibit D-1107A during  
11:36 12 his testimony. Do you recall that?

11:36 13 A. He was.

11:36 14 Q. Now, is this actually Intel source code?

11:36 15 A. No. It's not.

11:36 16 Q. Who wrote this code?

11:36 17 A. I wrote this code.

11:37 18 Q. And why did you write this code?

11:37 19 A. I wrote this code because Intel gave us this  
11:37 20 complicated encoded database of millions of entries, and I had  
11:37 21 to write code to decode that so I could analyze it.

11:37 22 Q. How did Dr. Sylvester get your code?

11:37 23 A. So the Court required that anything we wrote like  
11:37 24 this, the other side could get.

11:37 25 Q. And then did Dr. Sylvester use your code to generate

11:37 1 the values that he showed in that slide?

11:37 2 A. Yes. He did.

11:37 3 Q. Did he interpret the data he obtained from using your  
11:37 4 code correctly?

11:37 5 A. No. He interpreted it mis- -- incorrectly. He  
11:37 6 misinterpreted it.

11:37 7 Q. And can you explain how (loss of audio) to do that?

11:37 8 A. -- compensate for when the chip is cold. So when you  
11:37 9 compensate for when the chip is cold, that ends up with what  
11:37 10 you see on the right with V0 above the ring retention voltage.  
11:38 11 And, again, that makes sense, right? You want to operate at  
11:38 12 the voltage above where you -- you can remember.

11:38 13 Q. So he's comparing in his slide here the  
11:38 14 RING\_VF\_VOLTAGE\_0 to the RING\_RETENTION\_VOLTAGE, correct?

11:38 15 A. Yes. He is.

11:38 16 Q. But is he comparing them on an apples-to-apples basis  
11:38 17 at the same temperature?

11:38 18 A. No. So V/F 0 is measured at 100 degrees Celsius.  
11:38 19 RING\_RETENTION\_VOLTAGE is measured at zero degrees Celsius.  
11:38 20 That's the difference between boiling water and ice.

11:38 21 Q. Now, what happens if you measure V0 and the  
11:38 22 RING\_RETENTION\_VOLTAGE calibrated to the same temperatures?

11:38 23 A. If you measure them calibrated to the same  
11:39 24 temperatures, they, no surprise, match the Intel graph over  
11:39 25 here on the right.

11:39 1 Q. So the data that Dr. Sylvester presented to the jury  
11:39 2 in arguing that the RING\_RETENTION\_VOLTAGE can't be a minimum  
11:39 3 operating voltage because V0 is beneath it, was -- was he  
11:39 4 comparing those two values on an apples-to-apples basis or not?

11:39 5 A. No. He wasn't.

11:39 6 Q. Now, does Intel itself calibrate those voltage levels  
11:39 7 to the same temperature before presenting analysis?

11:39 8 A. Yes. They do.

11:39 9 Q. And when they're calibrated to a same temperature,  
11:39 10 apples-to-apples basis, what's the relationship between V0 and  
11:39 11 the RING\_RETENTION\_VOLTAGE?

11:39 12 A. So, again, Dr. Sylvester misinterpreted the results  
11:39 13 of my code. V0 is calibrated at a different temperature than  
11:40 14 the RING\_RETENTION\_VOLTAGE. When you compensate for  
11:40 15 temperature, V0 is going to be always above the  
11:40 16 RING\_RETENTION\_VOLTAGE.

11:40 17 Q. So how does this relate to your opinion that the  
11:40 18 RING\_RETENTION\_VOLTAGE is, in fact, the minimum operating  
11:40 19 voltage for the C6 SRAM, as claimed by the '373 patent?

11:40 20 A. Again, when I interpret the data correctly, it  
11:40 21 further confirms my opinion.

11:40 22 Q. And is that what we see in Intel's own Exhibit 505?

11:40 23 A. That's correct.

11:40 24 Q. Now, did you see any other evidence about how the  
11:40 25 RING\_RETENTION\_VOLTAGE is -- is compensated?

11:40 1 A. I did.

11:40 2 MR. HEINRICH: And can we go to Exhibit 3662 at Page 702?

11:40 3 BY MR. HEINRICH:

11:41 4 Q. And is this the document we saw last week in your  
11:41 5 direct testimony?

11:41 6 A. It is. And I believe Dr. Sullivan also used this  
11:41 7 document.

11:41 8 Q. Dr. Sylvester?

11:41 9 A. I did it again. Dr. Sylvester.

11:41 10 MR. HEINRICH: So let's pull up the row on  
11:41 11 RING\_RETENTION\_VOLTAGE.

11:41 12 BY MR. HEINRICH:

11:41 13 Q. What does this document tell us about the temperature  
11:41 14 at which the RING\_RETENTION\_VOLTAGE is measured at?

11:41 15 A. Okay. Remember that phenomena I talked about? It's  
11:41 16 called inverse temperature dependance, ITD. Look at the last  
11:41 17 sentence. This is inverse temperature dependance corrected to  
11:41 18 zero degrees Celsius.

11:41 19 Q. And then, again, when the V0 is similarly IDD  
11:41 20 corrected at zero degrees, what do we see?

11:41 21 A. V0, of course, is going to be above this minimum  
11:41 22 voltage, you need remember.

11:41 23 Q. Okay. So did you hear anything last week from  
11:42 24 Dr. Sylvester or Intel's other witnesses that changed your  
11:42 25 opinion that Intel infringes the '373 patent?

11:42 1 A. No.

11:42 2 Q. And did you see anything or hear anything last week  
11:42 3 that changed your opinion about whether Intel infringes the  
11:42 4 '759 patent?

11:42 5 A. No. I did not.

11:42 6 Q. Okay.

11:42 7 MR. HEINRICH: Thank you very much, Professor Conte.

11:42 8 THE WITNESS: Thank you.

11:42 9 THE COURT: Mr. Lee, I won't hold you to this. Do you  
11:42 10 anticipate going longer than about 30 minutes with this  
11:42 11 gentleman?

11:42 12 MR. LEE: No. Your Honor, I'm going to try -- I'm not  
11:42 13 going to plow old ground. I'm going to try to finish with him  
11:43 14 in 15 minutes.

11:43 15 THE COURT: Perfect. Thank you. And I'm not counting.  
11:43 16 I'm just --

11:43 17 MR. LEE: I know. 15 minutes will be enough and then it  
11:43 18 will be lunchtime.

11:43 19 THE WITNESS: I respect this booth protects us all from  
11:43 20 COVID, but I just wish it was a little bigger.

11:43 21 (Laughter.)

11:43 22 THE COURT: We'll work on that for the next trial.

11:43 23 THE WITNESS: Thank you, Your Honor.

11:43 24 CROSS-EXAMINATION

11:43 25 BY MR. LEE:

11:43 1 Q. Dr. Conte, good morning.

11:43 2 A. Good morning.

11:43 3 Q. Let me end where -- let me start where you ended on  
11:43 4 infringement issues. Can we do that?

11:43 5 A. Yes.

11:43 6 Q. Now, I'm not going to replow old ground. I'm going  
11:43 7 to try to do this very quickly, if we can.

11:43 8 Let me start with the '373 patent. Can we do that?

11:43 9 A. Yes.

11:43 10 Q. And I'm going to ask you about some facts relevant to  
11:43 11 the C6 SRAM. That's what you say is the memory, correct?

11:43 12 A. Yes.

11:43 13 Q. In Haswell, correct?

11:43 14 A. Yes. And also in Broadwell.

11:44 15 Q. Now, you were here when Jonathan Douglas testified,  
11:44 16 were you not?

11:44 17 A. I was.

11:44 18 Q. He testified that Intel does not identify a lowest  
11:44 19 retention voltage for the C6 SRAM, correct?

11:44 20 A. I believe that was his testimony. Yes.

11:44 21 MR. LEE: And if I could have DDX-19.3.

11:44 22 BY MR. LEE:

11:44 23 Q. We can agree that you and he simply disagree,  
11:44 24 correct?

11:44 25 A. That's correct.

11:44 1 Q. Now, Mr. Douglas also testified that there's no  
11:44 2 relationship between RING\_RETENTION\_VOLTAGE and the C6 SRAM.  
11:44 3 Do you recall that testimony?

11:44 4 A. I do.

11:44 5 Q. And, again, the two of you disagree, correct?

11:44 6 A. Yes. We disagree.

11:44 7 Q. Now, Mr. Douglas also testified that the ring  
11:44 8 retention -- the ring -- withdrawn.

11:44 9 Mr. Douglas also testified that the ring domain operates  
11:44 10 at a voltage below RING\_RETENTION\_VOLTAGE, known as  
11:44 11 RING\_VF\_VOLTAGE\_0, correct?

11:44 12 A. He did.

11:45 13 Q. Right. And, again, you just disagree with the person  
11:45 14 who came here, testified under oath, who designed the product,  
11:45 15 correct?

11:45 16 A. I did.

11:45 17 Q. Right. And on each of these different issues, you  
11:45 18 and Mr. Douglas -- were you here for his cross-examination?

11:45 19 A. I was.

11:45 20 Q. And you heard everything he said about how the  
11:45 21 accused features work in Haswell?

11:45 22 A. I believe I did.

11:45 23 Q. And in Broadwell?

11:45 24 A. Yes.

11:45 25 Q. And on these key issues that are key to infringement,

11:45 1 the two of you simply disagree, correct?

11:45 2 A. I wouldn't characterize it that way.

11:45 3 Q. Now, let me ask you -- well, we just looked at the  
11:45 4 slides. Where he said no, you said yes. Where he said no, you  
11:45 5 said yes. You would call that disagreement, wouldn't you?

11:45 6 A. On those issues, yes.

11:45 7 Q. And those are issues that are important to the jury's  
11:45 8 determination of infringement, correct?

11:45 9 A. Yes.

11:45 10 Q. All right.

11:45 11 MR. LEE: Now, could I have D-505?

11:45 12 MY MR. LEE:

11:45 13 Q. Which you talked to the jury about today.

11:46 14 Do you have that on the screen? Do you recall that?

11:46 15 A. I do.

11:46 16 Q. And you were using this document to talk about that  
11:46 17 comparative set of charts that you had put on the screen. Do  
11:46 18 you recall that?

11:46 19 A. Yes.

11:46 20 Q. Now, you know that this document was something that  
11:46 21 didn't describe a finished product, don't you?

11:46 22 A. I believe virtually all the documents Intel produced  
11:46 23 were drafts.

11:46 24 Q. This was -- in particular, if I turn you to Page 23,  
11:46 25 refers to TBD, correct? You see TBD, TBD, TBD.

11:46 1 A. I do.

11:46 2 Q. You know what that is. That's to be determined,  
11:46 3 correct?

11:46 4 A. That's right.

11:46 5 Q. If I turn you to Page 27, and I highlight 2.3.5.1,  
11:47 6 you'll see "TBD, the following is not the POR." That's to be  
11:47 7 determined, the following is not the plan of record, correct?

11:47 8 A. That's correct.

11:47 9 Q. So the one thing we can agree upon, this document,  
11:47 10 surely, is not a final description of the products, correct?

11:47 11 A. That's correct.

11:47 12 Q. Now, you were here when Mr. Borkowski testified as  
11:47 13 well, correct?

11:47 14 A. I was.

11:47 15 Q. He actually wrote much of the code, correct?

11:47 16 A. I'm sorry?

11:47 17 Q. He wrote some of the code, correct?

11:47 18 A. You're referring to the P-code?

11:47 19 Q. Yes.

11:47 20 A. Yes. He did.

11:47 21 Q. Now, he said that ring -- RING\_VF\_VOLTAGE\_0, which  
11:47 22 you just talked to Mr. Heinrich about, does, in fact,  
11:47 23 correspond to a voltage level actually used in some conditions,  
11:47 24 correct?

11:47 25 A. That's correct.

11:47 1 Q. And, again, you just disagree?

11:48 2 A. That's incorrect.

11:48 3 Q. Well, you agree that it is then? You agree with him  
11:48 4 on that issue?

11:48 5 A. Yes. It's a --

11:48 6 Q. Okay. Fair enough.

11:48 7 A. It's a voltage that's actually used, yes.

11:48 8 Q. Good. Now, the '373 patent also claims regulated  
11:48 9 voltages, correct?

11:48 10 A. Yes.

11:48 11 Q. And you told the jury last week that a regulated  
11:48 12 voltage is a reliable voltage, correct?

11:48 13 A. It's a controlled voltage.

11:48 14 Q. And Mr. Douglas told the jury, when he came here to  
11:48 15 talk about his own product, that VCCR is a floating and not  
11:48 16 reliable voltage, correct?

11:48 17 A. I believe that was his testimony. Yes.

11:48 18 MR. LEE: So can I have DDX-19.7?

11:48 19 BY MR. LEE:

11:48 20 Q. Again, the two of you now just disagree, correct?

11:48 21 A. I don't think so. And I can explain.

11:48 22 Q. Well, your answer is you don't think so?

11:49 23 A. That's correct.

11:49 24 Q. Okay. Let me ask you about a different topic.

11:49 25 You told the jury -- you told the jury last week that the

11:49 1 ramp -- that there was a ramp as part of the Package C7  
11:49 2 transition, correct?

11:49 3 A. That's correct.

11:49 4 Q. You said it happens hundreds of times per second,  
11:49 5 correct?

11:49 6 A. Up to. Yes.

11:49 7 MR. LEE: Can I have DDX-19.10?

11:49 8 BY MR. LEE:

11:49 9 Q. Mr. Douglas came here and he said it happens a few  
11:49 10 times per second. Do you recall that?

11:49 11 A. Yes. I do.

11:49 12 Q. And on cross-examination, he wasn't asked a single  
11:49 13 word about whether that was correct or not?

11:49 14 A. I don't recall one way or the other.

11:49 15 Q. Now, let's go to the '759 patent. You were here when  
11:49 16 Dr. Rotem testified, correct?

11:49 17 A. Yes.

11:49 18 Q. You were here when Mr. Borkowski testified, correct?

11:49 19 A. Yes.

11:49 20 Q. Now, let's just look at where we -- you agree or  
11:50 21 disagree with them.

11:50 22 Dr. Rotem and Mr. Borkowski testified about Speed Shift in  
11:50 23 particular, correct?

11:50 24 A. Yes. That's correct.

11:50 25 Q. Now, you disagree with them about how some of the

11:50 1 features of Speed Shift works, correct?

11:50 2 A. I don't believe I disagree in any substantive  
11:50 3 feature.

11:50 4 Q. Well, let's see.

11:50 5 MR. LEE: Could I have DDX-19.11 on the screen?

11:50 6 BY THE WITNESS:

11:50 7 A. Oh, I see. Yes. I disagree with that.

11:50 8 BY MR. LEE:

11:50 9 Q. Yes. Dr. Rotem says that the Lake series of  
11:50 10 processors, using his revolutionary algorithms that led to his  
11:50 11 Ph.D. thesis, is totally different from Yonah, correct?

11:50 12 A. I don't disagree with that.

11:50 13 Q. Right. Now, if we -- he also testified that it is  
11:51 14 totally autonomous. We don't get any requests, correct?

11:51 15 A. I disagree with that.

11:51 16 Q. So Dr. Rotem says no request; you say a request,  
11:51 17 correct?

11:51 18 A. That's correct.

11:51 19 MR. LEE: Let's turn to DDX-19.12.

11:51 20 BY MR. LEE:

11:51 21 Q. Now, we're looking at Mr. Borkowski's testimony. Do  
11:51 22 you see that?

11:51 23 A. Yes.

11:51 24 Q. And again he designed some of the P-code, right?

11:51 25 A. Yes. I see that.

11:51 1 Q. Now, when he was asked whether the PCU requested  
11:51 2 information, he said, "No. It doesn't... There's no explicit  
11:51 3 trigger."

11:51 4 You disagree, correct?

11:51 5 A. Not exactly.

11:51 6 Q. Okay. Well, we'll let the testimony stand. But we  
11:51 7 do agree on the request issue, you disagree with Dr. Rotem,  
11:51 8 correct?

11:51 9 A. Not precisely.

11:51 10 Q. Well, let's go back and look at it.

11:51 11 A. Okay.

11:51 12 MR. LEE: Can I have the prior demonstrative, please?

11:52 13 BY MR. LEE:

11:52 14 Q. Dr. Rotem: "We don't get any request."

11:52 15 Dr. Conte: "So there is a request as required by the  
11:52 16 claims?"

11:52 17 "There is."

11:52 18 That's the testimony the jury heard last week, correct?

11:52 19 A. Yes. I believe so.

11:52 20 Q. All right. Now, let me go to another issue to  
11:52 21 explore your agreement or disagreement -- withdrawn.

11:52 22 You've talked extensively today about your disagreement  
11:52 23 with Dr. Sylvester, correct?

11:52 24 A. Among other things. Yes.

11:52 25 Q. And with Dr. Grunwald, correct?

11:52 1 A. Among other things. Yes.

11:52 2 Q. I thought I was listening carefully this morning, but  
11:52 3 I didn't hear you mention Dr. Rotem, Mr. Borkowski or  
11:52 4 Mr. Douglas. And I want to focus upon them, okay?

11:52 5 A. Okay.

11:52 6 MR. LEE: Now, let me bring up DDX-9.15 if I could,  
11:52 7 Dr. Conte.

11:52 8 BY MR. LEE:

11:52 9 Q. This is the testimony you gave on one-to-one  
11:53 10 relationships. Do you recall that?

11:53 11 A. I do.

11:53 12 Q. And this is an assumption -- or this is information  
11:53 13 that you provided to Dr. Sullivan that is part of his six-step  
11:53 14 damages analysis, correct?

11:53 15 A. Yes.

11:53 16 Q. You say that there's a one-to-one relationship, power  
11:53 17 to speed, correct?

11:53 18 A. Yes.

11:53 19 Q. Dr. Rotem said that's not true. It's much more  
11:53 20 complicated than that, correct?

11:53 21 Is that what he said, sir?

11:53 22 A. That's what he said here.

11:53 23 Q. Right. So just so we're clear, on the '759 patent,  
11:53 24 on the question of requests, you and Dr. Rotem disagree,  
11:53 25 correct?

11:53 1 A. Not entirely, but in -- with the testimony you  
11:53 2 pointed to, yes.

11:53 3 Q. And we can agree that the claim term specifically  
11:54 4 requires a request, correct?

11:54 5 A. It does.

11:54 6 Q. And if Dr. Rotem is correct and there is no request,  
11:54 7 there's no infringement, correct?

11:54 8 A. I can't conclude that one way or another. Sorry.

11:54 9 Q. You don't know?

11:54 10 A. I can't conclude that one way or another. Sorry.

11:54 11 Q. So let me ask again: If Dr. Rotem is correct and  
11:54 12 there is no request, is there or is there not infringement?

11:54 13 A. Again, I can't conclude that one way or another.

11:54 14 Q. And if I go back to the '373 patent, if the  
11:54 15 minimum -- if the RING\_RETENTION\_VOLTAGE is, in fact, not a  
11:54 16 minimum as Mr. Douglas said, there is no infringement, correct?

11:54 17 A. Again, I cannot answer that one way or the other.

11:54 18 Q. All right. So let me just ask you a few questions  
11:54 19 before I finish on the question of invalidity.

11:55 20 You understand that there's no dispute among the parties  
11:55 21 that Yonah came first, correct?

11:55 22 A. I don't believe that's true.

11:55 23 Q. You don't -- didn't anyone tell you that the parties  
11:55 24 met with His Honor and agreed that it was prior art?

11:55 25 THE COURT: Counsel.

11:55 1 BY THE WITNESS:

11:55 2 A. At the time of my report, that wasn't an agreement.

11:55 3 I'm sorry.

11:55 4 BY MR. LEE:

11:55 5 Q. Okay. I'm not talking about the time of your report.

11:55 6 I'm talking about March 1st, 2021 in this trial. Did you know

11:55 7 that the parties have reached the agreement that Yonah came

11:55 8 first?

11:55 9 A. I did not know that. Thank you for informing me.

11:55 10 Q. All right. So I'm going to represent to you that  
11:55 11 that's the agreement, Yonah indisputably came first. Do you  
11:55 12 have that in mind?

11:55 13 A. I have in mind the parties agreed to that.

11:55 14 Q. Now, you actually had taken a position in your report  
11:55 15 to the contrary, correct?

11:55 16 A. I had.

11:55 17 Q. So your report disagrees with what the parties have  
11:55 18 agreed to for this case, correct?

11:55 19 A. In that one instance. Yes.

11:56 20 Q. Yeah. And I want to ask you just a couple more  
11:56 21 questions about what occurred at the Patent Office on the '759  
11:56 22 patent.

11:56 23 You understand there's a difference between SpeedStep,  
11:56 24 SpeedStep in Yonah, and Speed Shift, don't you?

11:56 25 A. You're asking if there's a difference between those

11:56 1 three things?

11:56 2 Q. Yes.

11:56 3 A. Yes. There's a difference between those three  
11:56 4 things.

11:56 5 Q. SpeedStep existed before Yonah, correct?

11:56 6 A. It did.

11:56 7 Q. Yonah had SpeedStep in a two-core processor, correct,  
11:56 8 in the two-core microprocessor, correct?

11:56 9 A. Yes. What was different was that Yonah had two  
11:56 10 cores.

11:56 11 Q. Right. And I'm going to take you now to the document  
11:56 12 that Mr. Chu showed Dr. Grunwald on Friday afternoon.

11:56 13 MR. LEE: Could I have PTX-008-A at Page 68?

11:56 14 BY MR. LEE:

11:57 15 Q. Now, Mr. Chu was asking Dr. Grunwald whether the  
11:57 16 Patent Office had before it SpeedStep. Do you recall that?

11:57 17 A. Yes.

11:57 18 Q. He didn't ask whether it had before it Yonah,  
11:57 19 correct?

11:57 20 A. Correct.

11:57 21 Q. And he focused just on this first paragraph, under  
11:57 22 the title "Intel Pentium III with enhanced SpeedStep  
11:57 23 Technology." Do you see that?

11:57 24 A. I see that.

11:57 25 Q. And he asked Dr. Grunwald some questions about the

11:57 1 first paragraph and the first paragraph only.

11:57 2 A. I believe so. I can't recall.

11:57 3 MR. LEE: Could I go down to -- and ask to blow up a  
11:57 4 paragraph that was not discussed, "0.18 Micron Technology."

11:57 5 BY MR. LEE:

11:57 6 Q. Do you see that?

11:57 7 A. Yes.

11:57 8 Q. If I look at the last sentence, it says, "This  
11:58 9 innovation makes it possible for CPUs to include up to  
11:58 10 28.1 million transistors in the core."

11:58 11 The product that was before the Patent Office was a  
11:58 12 single-core product, correct?

11:58 13 A. Yes.

11:58 14 Q. There is no evidence in the record at all that the  
11:58 15 two-core product called Yonah was before the Patent Office; is  
11:58 16 that not correct?

11:58 17 A. That's correct.

11:58 18 Q. Now, just a few more questions on Yonah. You agree  
11:58 19 it had two cores, correct?

11:58 20 A. Yes.

11:58 21 Q. You agree that it had a clock, correct?

11:58 22 A. Yes.

11:58 23 Q. You agree that the clock generated a clock frequency,  
11:58 24 correct?

11:58 25 A. Yes.

11:58 1 Q. You agree that in Yonah software had ultimate control  
11:58 2 over frequency changes, correct?

11:58 3 A. The operating system, yes.

11:58 4 Q. Yeah. Fair enough. It's an operating system,  
11:58 5 correct?

11:58 6 A. Yes.

11:58 7 Q. And the operating system was executed in the cores of  
11:59 8 Yonah, correct?

11:59 9 A. Yes.

11:59 10 Q. And it was that operating system in Yonah that made  
11:59 11 requests for changes in frequency, correct?

11:59 12 A. Well, it asked the hardware to change the  
11:59 13 frequencies. Yes.

11:59 14 Q. Okay.

11:59 15 MR. LEE: Now, could I have the '759 patent?

11:59 16 And could I have Columns 2 -- Column 2, Line 51 to 57?

11:59 17 BY MR. LEE:

11:59 18 Q. Do you recall reviewing this portion of the patent?

11:59 19 A. Yes.

11:59 20 Q. Okay. And this portion refers specifically to  
11:59 21 firmware, correct?

11:59 22 A. Yes.

11:59 23 Q. And it also refers specifically to software, correct?

12:00 24 A. Yes.

12:00 25 Q. Now, you would agree with me that Yonah had something

12:00 1 called a PLL or phase-locked loop, correct?

12:00 2 A. Yes.

12:00 3 Q. It had one, correct?

12:00 4 A. I don't recall.

12:00 5 Q. You don't recall one way or another?

12:00 6 A. It probably had one. Yes.

12:00 7 Q. It had one that provided common clock control to all

12:00 8 of Yonah, correct?

12:00 9 A. I believe that's correct. Yes.

12:00 10 Q. Thank you.

12:00 11 MR. LEE: Nothing further, Your Honor.

12:00 12 THE COURT: Thank you, Mr. Lee. Counsel?

12:00 13 MR. HEINRICH: I have about 20 minutes to half an hour.

12:00 14 Should we break for lunch now or should we break later?

12:00 15 THE COURT: I think we need to continue to go.

12:00 16 MR. LEE: 20 minutes to half an hour on redirect?

12:00 17 THE COURT: Redirect is going to be limited to what

12:00 18 Mr. Lee raised.

12:00 19 MR. HEINRICH: Understood. Should we do that now?

12:00 20 THE COURT: Ladies and gentlemen of the jury, which would

12:00 21 you prefer to do? Lunch now or finish with this witness?

12:01 22 JUROR: Finish.

12:01 23 THE COURT: Let's finish.

12:01 24 MR. HEINRICH: Okay.

12:01 25 REDIRECT EXAMINATION

12:01 1 BY MR. HEINRICH:

12:02 2 Q. Hello again, Professor Conte. So just taking up  
12:02 3 where Mr. Lee left off, he showed you a passage from the patent  
12:02 4 that referred to software or hardware. Do you recall that?

12:02 5 A. Yes. I do.

12:02 6 Q. Now, to do a proper validity analysis, is it your  
12:02 7 understanding that you have to compare the prior art to a  
12:02 8 passage in the specification, or do you have to compare it to  
12:02 9 the claim?

12:02 10 A. You compare it to the claim.

12:02 11 Q. And Claim 14 in the asserted claims, are they  
12:02 12 referring to a software implementation, or are they referring  
12:02 13 to an implementation in a programmable clock controller with  
12:03 14 embedded computer program?

12:03 15 A. They're referring to the latter, in hardware.

12:03 16 Q. And does anything with -- that Mr. Lee pointed to  
12:03 17 change your opinion that Yonah doesn't have a programmable  
12:03 18 clock controller with an embedded computer program?

12:03 19 A. No. It does not.

12:03 20 Q. And does that mean that Yonah is missing a number of  
12:03 21 limitations of the claims of the '759 patent?

12:03 22 A. Yes.

12:03 23 MR. LEE: Your Honor, I'm going to object. This is  
12:03 24 redirect and he's just leading him. He's not asking questions.

12:03 25 THE COURT: Well, to the extent he's asking what you said

12:03 1 and filling that in, I'm okay with. But generally speaking, I  
12:03 2 will not let him lead. But I think you're -- I'll overrule  
12:03 3 that objection. But I appreciate it.

12:03 4 MR. HEINRICH: So let's turn to SpeedStep.

12:03 5 BY MR. HEINRICH:

12:03 6 Q. And Mr. Lee pointed you to the SpeedStep document  
12:04 7 that was cited in prosecution of the '759 patent. Do you  
12:04 8 recall that?

12:04 9 A. Yes. I do.

12:04 10 Q. Now, did that -- how did that implementation of  
12:04 11 SpeedStep work in relationship to what you explained to the  
12:04 12 jury today?

12:04 13 A. That SpeedStep implementation worked identical to how  
12:04 14 it worked in Yonah.

12:04 15 Q. And what was making the decisions under the SpeedStep  
12:04 16 implementation that was disclosed to the Patent Office during  
12:04 17 the prosecution of the '759 patent?

12:04 18 A. That was the operating system. That was Windows.  
12:04 19 That was what Microsoft makes in Redmond, Washington.

12:04 20 Q. Now, was that cited application of SpeedStep, did  
12:04 21 that have a programmable clock controller with an embedded  
12:04 22 computer program?

12:04 23 A. No. It did not.

12:04 24 Q. Any more than Yonah did?

12:05 25 A. Correct. No more than Yonah did.

12:05 1 Q. Okay. So you were asked -- so does it matter, for  
12:05 2 purposes of the mechanism of speed control, whether there's one  
12:05 3 core or two cores or four cores?

12:05 4 A. No. It does not.

12:05 5 Q. Now, you were asked some questions about Mr. Douglas'  
12:05 6 testimony. Do you recall that?

12:05 7 A. I do.

12:05 8 Q. And one of the questions you were asked was about  
12:05 9 Mr. Douglas, who was comparing V0 to the  
12:05 10 RING\_RETENTION\_VOLTAGE. Do you recall his testimony on that --  
12:05 11 on that point?

12:05 12 A. I do.

12:05 13 Q. And he made a graph during the course of his  
12:05 14 testimony purporting to show the relative levels?

12:06 15 A. I recall that. Yes.

12:06 16 Q. And is there a simple disagreement between you and  
12:06 17 Mr. Douglas or something else?

12:06 18 A. It's much more than that.

12:06 19 Q. Can you explain?

12:06 20 A. Yes. Like I said, it -- how can you operate a  
12:06 21 circuit below the retention voltage of the memory? Your memory  
12:06 22 wouldn't work.

12:06 23 Q. And how does Mr. Douglas' graph that he showed relate  
12:06 24 to Dr. Sylvester's?

12:06 25 A. They're extremely close.

12:06 1 Q. And did Mr. Douglas make the same error that  
12:06 2 Dr. Sylvester made?

12:06 3 A. I can only conclude he did.

12:06 4 Q. When the values are compensated, what's the  
12:06 5 relationship between V0 and RING\_RETENTION\_VOLTAGE?

12:06 6 A. When you compensate them with equations that were in  
12:06 7 that very document we were looking at, you'll end up with V0  
12:06 8 always above RING\_RETENTION\_VOLTAGE.

12:06 9 Q. And -- and what did you do to study the relative  
12:07 10 levels of these values and the ring retention levels in  
12:07 11 particular?

12:07 12 A. I examined the actual P-code.

12:07 13 Q. And what is that?

12:07 14 A. That is the code running on the -- again, on the  
12:07 15 programmable clock controller that includes the PCU in the case  
12:07 16 of the Skylake products.

12:07 17 Q. Did you rely solely on Exhibit 505 for your analysis?

12:07 18 A. I did not.

12:07 19 Q. Now, Mr. Lee showed you some other portions of  
12:07 20 Exhibit 505 that said TBD. Do you recall that?

12:07 21 A. I do.

12:07 22 Q. Does -- do those other portions relate to that graph  
12:07 23 that we -- we saw?

12:07 24 A. I don't believe so. No.

12:07 25 Q. The fact that other -- there's other references of

12:07 1 TBD in that document, does it change the fact that V0 is above  
12:08 2 the RING\_RETENTION\_VOLTAGE when it's calibrated  
12:08 3 apples-to-apples?

12:08 4 A. It doesn't. Because, again, I verified with the code  
12:08 5 that's in the PCU.

12:08 6 Q. So what is "TBD," by the way?

12:08 7 A. To be determined.

12:08 8 Q. Does -- does that -- you mentioned that you saw  
12:08 9 mostly drafts of Intel documents. Do they still provide  
12:08 10 meaningful information that experts, such as yourself, can rely  
12:08 11 on reliably?

12:08 12 A. Yes. They do.

12:08 13 Q. Okay. So you were shown some slides and you offered  
12:08 14 to explain in reference to some of Mr. Lee's questions -- why  
12:08 15 don't we take a look at some of those.

12:09 16 MR. HEINRICH: Can we pull up DDX-19.7, for example?

12:09 17 BY MR. HEINRICH:

12:09 18 Q. So --

12:09 19 A. I don't -- I don't see it.

12:09 20 Q. Hopefully it'll come on in a moment.

12:09 21 A. I see it. Okay.

12:09 22 Q. And I believe you were asked if you simply disagreed  
12:09 23 with Mr. Douglas, and you offered to explain. Do you recall  
12:09 24 that?

12:09 25 A. Yes.

12:09 1 Q. And can you explain for us?

12:09 2 A. Yeah. If you remember me talking about this, Intel  
12:09 3 drains that tank and they ramp it down slowly. And when  
12:10 4 they're done, they know that voltage remains at zero throughout  
12:10 5 the time that they have the CLR domain sleeping.

12:10 6 So they've controlled it when it's up. They control it  
12:10 7 when it ramps down, and they control it when it's zero.

12:10 8 Q. And what's that conclusion based on, Professor Conte?

12:10 9 A. That conclusion is based on looking at the source  
12:10 10 code. It's based on also looking at Intel documents.

12:10 11 Q. Okay. So you were also asked about some testimony  
12:10 12 from Dr. Rotem.

12:10 13 MR. HEINRICH: And let's go to DDX-19.11.

12:10 14 BY MR. HEINRICH:

12:10 15 Q. And, again, you offered to explain, and can you do  
12:10 16 that here, sir?

12:10 17 A. Yes. So I think what he's talking about here is he's  
12:10 18 looking at it from the standpoint of the C0 residency counters.  
12:11 19 And when you only go that far, then we can say, well, there's  
12:11 20 no request. But you got to remember, those counters are going  
12:11 21 to be adjusted because you get the C's -- this Core\_Active  
12:11 22 signal from the cores.

12:11 23 So we actually, I think, don't exactly disagree. It just  
12:11 24 depends on what part of the system you're looking at.

12:11 25 Q. And, again, did you base your analysis on the source

12:11 1 code of Intel's products?

12:11 2 A. I did.

12:11 3 Q. And did you examine in particular the source code for  
12:11 4 that Core\_Active request?

12:11 5 A. I did.

12:11 6 Q. Is the Core\_Active request telemetry information?

12:11 7 A. Yes.

12:11 8 Q. Now, do you recall Dr. Grunwald's testimony about a  
12:11 9 request being able to constitute a statement of condition? Do  
12:12 10 you recall that?

12:12 11 A. Yes. I do.

12:12 12 Q. And how does that relate to what counsel's calling a  
12:12 13 disagreement between you and Dr. Rotem?

12:12 14 A. Well, it is correct as a statement of condition,  
12:12 15 right? It's saying the core is active.

12:12 16 So Dr. Rotem is saying that's not a request. He's looking  
12:12 17 only at the core -- the C0 residency counters.

12:12 18 But think about it this way: These counters change as you  
12:12 19 go through these windows. So imagine you start at the window  
12:12 20 with a five in one of those counters; and you go all the way to  
12:12 21 the end of the window, and at the end, it's five.

12:12 22 Then you go to the next window, and during the next window  
12:12 23 there's a Core\_Active and it goes six, seven, eight, nine, ten,  
12:12 24 and then you end.

12:12 25 So what Dr. Rotem is not considering a request is really

12:12 1 the fact that the counter from this window to this window  
12:12 2 actually changes. But if you recall, there was a lot of talk  
12:12 3 about that on Tuesday. And I said that that's indicative of a  
12:13 4 request.

12:13 5 Q. And if one were to accept Dr. Grunwald's  
12:13 6 acknowledgement that a statement of condition can be a request,  
12:13 7 then what's your conclusion?

12:13 8 A. Then I also agree that this -- Lake products  
12:13 9 infringe.

12:13 10 Q. Okay. Finally, you were asked some questions about  
12:13 11 your opinions regarding the conservative estimate of a  
12:13 12 one-to-one power savings speed or performance in speed idea.  
12:13 13 Do you recall that?

12:13 14 A. I do.

12:13 15 Q. And during your testimony -- or during your direct  
12:13 16 testimony you pointed to one source of evidence on that,  
12:13 17 PTX-3523.

12:13 18 MR. HEINRICH: Why don't we pull that up?

12:14 19 You know what? Why don't we do this. Why don't we pull  
12:14 20 up PDX-4.115, which was Professor Conte's demonstratives from  
12:14 21 last week.

12:14 22 BY THE WITNESS:

12:14 23 A. Okay. Here we are.

12:15 24 BY MR. HEINRICH:

12:15 25 Q. And whose paper were you relying on in part for your

12:15 1 opinion on this subject?

12:15 2 A. Dr. Rotem's paper.

12:15 3 MR. HEINRICH: And can we go to the passage in the paper  
12:15 4 that refers to the one-to-one ratio?

12:15 5 BY THE WITNESS:

12:15 6 A. Here -- actually, can we go a little further than  
12:15 7 that? Just I need that next line. That's good. That's good.

12:15 8 Okay. Here it is. So "IPC features that caused  
12:15 9 one-to-one ratio of power to IPC." That is talking -- IPC  
12:15 10 means instructions per cycle. So that means speed. How many  
12:15 11 instructions are you doing per cycle? And he's saying it's a  
12:15 12 one-to-one ratio of power to speed in his own paper.

12:15 13 BY MR. HEINRICH:

12:15 14 Q. And, again, that's Dr. Rotem, right?

12:15 15 A. That's Dr. Rotem, yes.

12:15 16 Q. Now, is Dr. Rotem saying this in the context of this  
12:16 17 litigation or is he saying that outside the context of this  
12:16 18 litigation?

12:16 19 A. He's saying that outside the context of this  
12:16 20 litigation. And this references the time frame of Haswell and  
12:16 21 Broadwell, I should indicate.

12:16 22 Q. So -- and is there a disagreement between you and  
12:16 23 what Dr. Rotem wrote at the relevant time period outside of  
12:16 24 litigation?

12:16 25 A. No.

12:16 1 Q. Okay.

12:16 2 MR. HEINRICH: Thank you very much, Professor Conte.

12:16 3 THE COURT: Mr. Lee?

12:16 4 RECROSS-EXAMINATION

12:16 5 BY MR. LEE:

12:17 6 Q. Just a few more questions, Dr. Conte.

12:17 7 You were just criticizing Mr. Douglas' chart. Do you  
12:17 8 remember that?

12:17 9 A. Yes.

12:17 10 Q. Now, Mr. Douglas came and took the same stand that  
12:17 11 you're testifying from, correct?

12:17 12 A. That's correct.

12:17 13 Q. He was cross-examined, correct?

12:17 14 A. That's correct.

12:17 15 Q. He was never asked a single question about that chart  
12:17 16 on cross-examination, was he?

12:17 17 A. He was not. No.

12:17 18 Q. And, you know, now that you're criticizing the chart,  
12:17 19 he doesn't get a chance to come back and answer your  
12:17 20 criticisms, correct?

12:17 21 A. That's my understanding. Yes.

12:17 22 Q. Because no one asked him about it on  
12:17 23 cross-examination, correct?

12:17 24 A. They didn't ask him. No.

12:17 25 Q. Right. And they didn't ask Dr. Sylvester either, did

12:17 1 they?

12:17 2 A. That's incorrect.

12:17 3 Q. Well, they didn't ask Dr. Sylvester about

12:18 4 Mr. Douglas' chart, did they?

12:18 5 A. That's incorrect.

12:18 6 Q. All right. Fair enough.

12:18 7 So what we can agree about is, they didn't ask Mr. Douglas

12:18 8 about the chart he prepared for the jury that you're

12:18 9 criticizing for the first time today, correct?

12:18 10 A. That's correct.

12:18 11 Q. Now, you said you reviewed the P-code, correct?

12:18 12 A. That's correct.

12:18 13 Q. Mr. Borkowski wrote the P-code, didn't he?

12:18 14 A. My understanding is he wrote a large portion of it.

12:18 15 MR. LEE: And can I have lastly DDX-19.15?

12:18 16 BY MR. LEE:

12:18 17 Q. You know that in Dr. Rotem's testimony he actually

12:18 18 explained exactly the portion of his thesis and article that

12:18 19 you were just discussing with Mr. Heinrich, correct?

12:18 20 A. I don't recall one way or the other.

12:18 21 Q. And after having considered what he had written when

12:18 22 he disclosed his revolutionary idea, he said that there's no

12:19 23 one-to-one relationship, correct?

12:19 24 A. At the time frame he was indicating, I believe that's  
12:19 25 correct.

12:19 1 Q. Now, since you've referred several times to  
12:19 2 Dr. Rotem's Ph.D. dissertation, correct?  
12:19 3 A. I don't think I actually have.  
12:19 4 Q. Have you referred to the article?  
12:19 5 A. Yes.  
12:19 6 Q. Have you seen any articles or publications or Ph.D.  
12:19 7 theses written by the inventors of the '373 patent?  
12:19 8 A. I don't recall one way or the other.  
12:19 9 Q. The '759 patent?  
12:19 10 A. Again, same answer.  
12:19 11 Q. The -- after the hundreds of hours of work you've  
12:19 12 done, you cannot identify for us a single article or  
12:19 13 publication that would describe either of those two patents as  
12:19 14 stars or revolutionary, the way that Dr. Rotem described his  
12:19 15 own invention, correct?  
12:19 16 A. Wow. I don't quite understand your question. I'm  
12:19 17 sorry.  
12:19 18 Q. Okay. If you can't answer it, you can't answer it.  
12:20 19 MR. LEE: Nothing further, Your Honor.  
12:20 20 THE COURT: You may step down, Doctor.  
12:20 21 THE WITNESS: Thank you.  
12:20 22 THE COURT: Ladies and gentlemen of the jury, it is -- if  
12:20 23 you all will give me one second. Mr. Lee, if I could have you  
12:20 24 and Mr. Chu up here for just one second.  
12:20 25 (Bench conference.)

12:20 1 THE COURT: So plaintiff has one witness left, right?

12:20 2 MR. CHU: Yes. And it'll be short.

12:20 3 THE COURT: So I think that takes care of our time. So

12:20 4 it's 12:20. I'm going to have the jury come back at 2:00.

12:20 5 Here's why. We have issues to take up before the jury charge.

12:21 6 I will put the witness on, which we'll get done and then we'll

12:21 7 have everything done.

12:21 8 At 2:00 we'll put on the witness. As soon as the witness

12:21 9 is done -- and you also can make your record during this period

12:21 10 of time on the motions. As soon as you're done with your

12:21 11 witnesses, you're going to rest -- or I think we're going to do

12:21 12 the charge and then closing arguments. That way they don't sit

12:21 13 around waiting for us for the charge.

12:21 14 MR. LEE: Okay.

12:21 15 THE COURT: We will -- I'm holding you with your two --

12:21 16 it'll be short. I will encourage you if I see that it's not

12:21 17 going too short.

12:21 18 MR. CHU: Yes. Charlotte Wen, junior lawyer -- Charlotte

12:21 19 Wen, who is a junior lawyer in our office, is going to be

12:21 20 handling the witness. And she assures me it's going to be

12:21 21 short and to the point.

12:21 22 THE COURT: Very good. I will encourage her.

12:22 23 MR. CHU: Okay. Thank you.

12:22 24 MR. LEE: I'm smiling. You just can't see it.

12:22 25 (Laughter.)

12:22 1 (Bench conference concludes.)

12:22 2 THE COURT: Ladies and gentlemen, if I were to use an  
12:22 3 analogy, we are rounding the curve and headed for home. We  
12:22 4 have one more witness, and then I will give you a -- I will  
12:22 5 read to you what the law is. You'll understand that more as I  
12:22 6 read it to you. And then we will have closing arguments in the  
12:22 7 case.

12:22 8 We have a little bit of housekeeping to do, and I think  
12:22 9 you all -- it'd be better -- are you all staying in while --  
12:22 10 during lunch anyway? Are you all here?

12:22 11 I think we will need until 2:00 so that we're organized  
12:22 12 with everything. But I will tell you, since you're here  
12:22 13 anyway, as soon as we are wrapped up and ready to go, we will  
12:22 14 bring you back in. We'll have the witness, we'll have the jury  
12:23 15 charge and we'll have the closing arguments. And then we'll  
12:23 16 talk about what to do thereafter given the lateness of the  
12:23 17 hour.

12:23 18 But you should count on enjoying your lunch. And then we  
12:23 19 will do what we need to do ministerially and then we'll get  
12:23 20 started, but we will finish today. And then your  
12:23 21 deliberations, as I've said repeatedly, will be entirely up to  
12:23 22 you all with the length of time. There's no -- there is no  
12:23 23 limit on that. That's entirely up to you to come up with a  
12:23 24 unanimous verdict.

12:23 25 Remembering -- this is the last time you get to hear this.

12:23 1 Remembering my instructions not to discuss the case amongst  
12:23 2 yourselves, I will dismiss you. The next time I dismiss you,  
12:23 3 it will be exactly the opposite, unless we break for the  
12:23 4 evening and then you'll wait on that. But the next time you  
12:23 5 all get together will be for deliberations.

12:23 6 So please -- you are excused until 2:00.

12:23 7 THE BAILIFF: All rise.

12:24 8 (Jury exited the courtroom at 12:24.)

12:24 9 THE COURT: You may be seated, Counsel.

12:24 10 If you'd like to go ahead, so I don't forget it, and  
12:24 11 quickly make your motions on the record that would have been  
12:24 12 made at the end of defendant's case. Mr. Lee, Mr. Chu.

12:24 13 MR. LEE: Your Honor, under Rule 50A, we renew the  
12:24 14 previously made and previously denied without prejudice motion  
12:24 15 on all issues as to which VLSI carries the burden of proof,  
12:24 16 infringement, willfulness and damages.

12:24 17 There are two things I would like to specifically point  
12:24 18 out for the record.

12:24 19 THE COURT: Yes, sir.

12:24 20 MR. LEE: There are two things I'd like to specifically  
12:24 21 point out for the record. One is the Doctrine of Equivalents  
12:24 22 for the '373 patent. There has been no evidence on the  
12:24 23 Doctrine of Equivalents for the '373 patent.

12:25 24 I think Mr. Chu could say that they're withdrawing that  
12:25 25 claim, and if so, we should get JMOL now. And the second issue

12:25 1 is --

12:25 2 THE COURT: If he does, then I'll grant that.

12:25 3 MR. LEE: And second is willful infringement, which I know  
12:25 4 Your Honor addressed during the charging conference. But  
12:25 5 whether it's pre-suit or post-suit, we claim that there is  
12:25 6 insufficient evidence for the issue of willfulness to go to the  
12:25 7 jury. And then --

12:25 8 THE COURT: And, Mr. Lee, let me tell you now, I am going  
12:25 9 to allow that -- I've made my decision, and I am going to allow  
12:25 10 willfulness to go to the jury.

12:25 11 MR. LEE: Okay. Fair enough, Your Honor.

12:25 12 And then we will amplify this in written form.

12:25 13 And we would also move for JMOL on the invalidity of the  
12:25 14 '759 asserted patent claims because it's now undisputed, I'm  
12:25 15 pretty sure, that Yonah is prior art and that it satisfies each  
12:25 16 and every limitation of the asserted claims.

12:25 17 Thank you, Your Honor.

12:25 18 THE COURT: Mr. Chu? I don't need a response to any of  
12:26 19 his motions. Just if you have a motion yourself.

12:26 20 MR. CHU: Yes. I'll be very brief orally and we'll follow  
12:26 21 it up with a written motion.

12:26 22 VLSI is moving for judgment as a matter of law because a  
12:26 23 reasonable jury would not have a legally sufficient evidentiary  
12:26 24 basis to return a verdict in favor of the defendant Intel.  
12:26 25 This includes the claims of infringement, willfulness,

12:26 1 Intel's -- all of Intel's noninfringement invalidity and  
12:26 2 unclean hands defenses and counterclaims and any and all other  
12:26 3 claims, theories and defenses that were presented at trial by  
12:26 4 either of the parties.

12:26 5 So we make this short motion to preserve our position. We  
12:26 6 will be filing a written motion. And then I have a 30-second  
12:26 7 item on a completely separate subject.

12:26 8 THE COURT: Let me first take the time to overrule all the  
12:26 9 motions that are pending.

12:26 10 Yes, sir.

12:27 11 MR. CHU: With Intel's permission and the Court's  
12:27 12 permission, my assistant has brought to the Court cupcakes for  
12:27 13 the jurors. And if the Court is comfortable just stating that  
12:27 14 the parties jointly -- for in the afternoon, not for lunch, but  
12:27 15 in the afternoon when they may be hearing the Court's jury  
12:27 16 instructions and then Mr. Lee's riveting closing argument and  
12:27 17 my sleeper of a closing argument, before that, they might want  
12:27 18 to partake.

12:27 19 THE COURT: Mr. Lee, do you have any objection to that?

12:27 20 MR. LEE: We'll pay half the cost of the cupcakes.

12:27 21 (Laughter.)

12:27 22 THE COURT: I just think it's presumptuous of Mr. Chu to  
12:27 23 believe that you're the one, Mr. Lee, that's going to do the  
12:27 24 closing argument, but maybe you told him already that you are  
12:27 25 going to.

12:27 1 MR. LEE: It is, because my colleague here is going to do  
12:27 2 some significant portion.

12:28 3 THE COURT: I understand. Yes. We'll -- Mr. Chu, that  
12:28 4 sounds wonderful.

12:28 5 I think you will find that the only issues we have left to  
12:28 6 take up when we get back at 1:30 are the issues of the jury  
12:28 7 charge with regard to damages. I have dealt with the other  
12:28 8 issues and hopefully my law clerk has told you how I've dealt  
12:28 9 with them. To the extent there were still controversies, we'll  
12:28 10 take those up at 1:30 and resolve those.

12:28 11 Assuming -- I'd like to -- Mr. Chu, just because you're up  
12:28 12 there, that's what I think we have left to resolve. Do you  
12:28 13 have any reason to think I'm wrong?

12:28 14 MR. CHU: I'm advised that the only open issues are the  
12:28 15 jury instructions.

12:28 16 THE COURT: Well, I get that, but I'm saying the only ones  
12:29 17 I think there are issues on are Instructions No. 34 and  
12:29 18 Instruction No. 35.

12:29 19 (Conference between counsel.)

12:29 20 MR. CHU: Yes.

12:29 21 THE COURT: Okay. Very good. Because I want to make sure  
12:29 22 we have enough time.

12:29 23 So we will resume at 1:30 with discussions over the jury  
12:29 24 charge. I'll make my rulings. We can get that -- yes, sir.

12:29 25 MR. TOMPROS: Your Honor, I apologize. I think there

12:29 1 actually are two other instructions, 34 and 35 -- Your Honor,  
12:29 2 34 and 35 are two where you had reserved judgment. I think you  
12:29 3 had also reserved judgment on 33.

12:29 4 THE COURT: Let me look.

12:29 5 MR. TOMPROS: And then on 24, that was the one where Your  
12:29 6 Honor was going to look at the willful -- oh, go ahead.

12:29 7 THE COURT: On 33, your -- maybe Evan hasn't gotten it to  
12:29 8 you. I have rewritten 33. Essentially what it is going to say  
12:30 9 is -- I'm paraphrasing whatever I've given you now.

12:30 10 Essentially it's going to be party neutral and say something  
12:30 11 like: If you find that anyone failed to do something, you can  
12:30 12 hold that against whichever party failed to do it. I don't  
12:30 13 name Intel. But during closing, the lawyers are free to say --  
12:30 14 be more robust.

12:30 15 If -- Mr. Chu, if you believe, or anyone believes, that  
12:30 16 the other side did this, but in my charge it will not say  
12:30 17 Intel.

12:30 18 MR. TOMPROS: Thank you, Your Honor.

12:30 19 THE COURT: With regard to willfulness, I'm going to  
12:30 20 give -- I am going to give a willfulness charge. Is there an  
12:30 21 issue over what that is?

12:30 22 MR. TOMPROS: There is, Your Honor. There's still the  
12:30 23 open question -- that was my one other point, so thank you,  
12:30 24 Your Honor. There's an open question as to whether the willful  
12:30 25 blindness --

12:30 1 THE COURT: Tell me what page you're on, because I --

12:30 2 MR. TOMPROS: I am on Page 29 of the instructions, and I  
12:30 3 think --

12:30 4 THE COURT: I know what I'm going to do there too.

12:30 5 MR. TOMPROS: Okay.

12:30 6 THE COURT: What I'm going to do on Page 29 is I'm going  
12:31 7 to give the proposed instruction from VLSI with this exception,  
12:31 8 the proposed sentence is: Willful blindness is just as  
12:31 9 culpable as actual willfulness.

12:31 10 That is going to read in my charge: Willful blindness is  
12:31 11 a factor to consider with respect to willfulness.

12:31 12 So here's what we need to accomplish when we get back,  
12:31 13 though: We need to accomplish resolving what the damages  
12:31 14 charge is going to be, and then we need to have enough time for  
12:31 15 you all to quickly put on the record what your objections are.  
12:31 16 You will then know. I won't be listening as though I'm going  
12:31 17 to make any changes, but I'll make sure we have time.

12:31 18 As soon as we're done with that, we'll bring the jury back  
12:31 19 in and we will resume with the next witness.

12:31 20 And then -- I'm sorry. And then I will read this as  
12:31 21 quickly as I can. It's 47 pages. I actually may tell the jury  
12:32 22 I'm going to try and read it quickly to save them some time.  
12:32 23 They'll have a copy of it.

12:32 24 And then my plan is for each side to have 45 minutes per  
12:32 25 side for closing.

12:32 1 If we -- depending on what time it is when I finish, if I  
12:32 2 can give you all a little more time, I will. I would like to  
12:32 3 get finished with everything no later than 6:00. That is my  
12:32 4 thinking.

12:32 5 Mr. Chu?

12:32 6 MR. CHU: Yes. There is one other item.

12:32 7 THE COURT: Okay.

12:32 8 MR. CHU: We had filed a motion about the following:

12:32 9 During the course of the trial, there was some back and forth,  
12:32 10 back and forth, it was a ping pong ball that had to do with the  
12:32 11 Federal Circuit opinion in Wisconsin Alumni Research Foundation  
12:32 12 versus Apple.

12:32 13 And Mr. Lee was reading from it and essentially was  
12:32 14 arguing to the jury that -- against the credibility of  
12:32 15 Professor Conte.

12:32 16 In fact, it was a claim construction issue. That's my  
12:33 17 understanding of it, being very familiar with the case, and  
12:33 18 that was Professor Conte's.

12:33 19 Our motion seeks to preclude both sides from arguing  
12:33 20 before the jury the Federal Circuit opinion, what it means,  
12:33 21 reading from it, and the like.

12:33 22 It may be said that we started down the path, but here's  
12:33 23 what happened: Earlier in the trial, Intel brought up a fact  
12:33 24 that Professor Conte had been engaged by several Irell clients.  
12:33 25 In response to our questions, he said he understood one of the

12:33 1 reasons why VLSI engaged him. He testified before two Texas  
12:33 2 juries where USAA had brought claims against Wells Fargo, and  
12:33 3 he said something to the effect, I think, the verdicts were 250  
12:33 4 million. They were actually 300 million. That -- to some of  
12:34 5 us, that's still real money.

12:34 6 And then Mr. Lee got up and started reading parts of the  
12:34 7 Federal Circuit opinion.

12:34 8 So I think it would just be unseemly for either side to be  
12:34 9 arguing about the meaning of the Federal Circuit opinion.

12:34 10 THE COURT: Mr. Lee?

12:34 11 MR. LEE: Your Honor, you recall that they opened the  
12:34 12 door. I objected. And you said to them: If you open the  
12:34 13 door, it's open to both of us. They walked through with just  
12:34 14 an oral recitation of the other cases.

12:34 15 I talked both orally and from the opinion. It's in the  
12:34 16 record. And we're entitled to argue what's in the record.  
12:34 17 There's nothing unseemly about it. And the quotes that I read  
12:34 18 are directly from the Federal Circuit's opinion.

12:34 19 If they had not opened the door, as I said, Your Honor, we  
12:34 20 wouldn't have done it. But having had them open the door and  
12:34 21 suggesting that they're allowed to have these -- this  
12:35 22 \$250 million verdict or more in the jury's memory but we're not  
12:35 23 allowed to argue what we said in opposition would be very  
12:35 24 prejudicial and unfair. You can't open the door and then  
12:35 25 decide that you don't like what happened when the door got

12:35 1 opened.

12:35 2 THE COURT: I'm going to -- I'm going to deny Mr. Chu's  
12:35 3 request. However, I'm going to limit you to speaking only as  
12:35 4 to what was -- I'm not going to let you get into anything about  
12:35 5 the case.

12:35 6 If something was asked or answered during the trial and I  
12:35 7 allowed it in, you can refer to the record of what was said  
12:35 8 during the trial specifically.

12:35 9 MR. LEE: That's my plan.

12:35 10 THE COURT: No one's going to read from that case. No  
12:35 11 one's going to discuss the case. It's only whatever evidence  
12:35 12 was admitted into the case and the question and answering  
12:35 13 specifically.

12:35 14 MR. LEE: Everything that I'm going to say is in a  
12:35 15 question or answer from Dr. -- between Dr. Conte and me.

12:35 16 MR. CHU: Your Honor, the problem is they were  
12:36 17 disagreeing -- there's this Q and A between Mr. Lee and  
12:36 18 Professor Conte.

12:36 19 Mr. Lee says: Isn't it that no reasonable jury could find  
12:36 20 X?

12:36 21 Yes, the line is there. But it was a claim construction  
12:36 22 issue in which the case turned.

12:36 23 Professor Conte then said: My understanding was claim  
12:36 24 construction.

12:36 25 Mr. Lee reads more. Professor Conte goes back and forth.

12:36 1 THE COURT: And, Mr. Chu, you can put in that your witness  
12:36 2 believed it was a claim construction issue. It -- whatever was  
12:36 3 said during the trial can be -- I can't keep out -- I can't  
12:36 4 keep aside from arguing what was admitted at trial. It's in  
12:36 5 the record.

12:36 6 MR. CHU: Yeah. We do think --

12:36 7 THE COURT: I can't -- I can't fix that now by limiting it  
12:36 8 now. It -- it's in the record.

12:36 9 MR. CHU: Okay. Just so the record's clear, we had  
12:36 10 objected when Mr. Lee proceeded down this particular line. And  
12:37 11 we do believe that the Court has discretion, in matters of this  
12:37 12 kind, to limit or prevent lawyers from making arguments on  
12:37 13 things that are so far afield. Even if it, in fact, "came in"  
12:37 14 on questions and answers, but there was no affirmative  
12:37 15 evidence.

12:37 16 THE COURT: Mr. Chu.

12:37 17 MR. CHU: He's just reading an opinion.

12:37 18 THE COURT: I -- if I admitted -- if I admitted something  
12:37 19 into evidence over your objection, it's in evidence. And  
12:37 20 whatever's in evidence is free to be discussed by either party.

12:37 21 Anything else?

12:37 22 MR. CHU: No, Your Honor.

12:37 23 THE COURT: We will be back -- I'll be back as close to  
12:37 24 1:30 as I can.

12:37 25 THE BAILIFF: All rise.

12:37 1 (Recess taken from 12:37 to 1:37.)

01:37 2 THE BAILIFF: All rise.

01:37 3 THE COURT: Thank you. You may be seated.

01:37 4 Okie dokie. Just so you all know, I've made a decision

01:38 5 primarily motivated by the fact that we're having issues with

01:38 6 how we get the exhibits to the jury.

01:38 7 We are not going to be able -- there are a number of

01:38 8 exhibits we are not going to be able to load on the system

01:38 9 between now and when the jury starts deliberating tomorrow.

01:38 10 So if we have them on the system now, good. If we don't

01:38 11 have them on the system now, you all need to make -- get a

01:38 12 printed copy of everything we don't have, and we'll do it the

01:39 13 old-fashioned way with all the other exhibits. And that way

01:39 14 they'll have all the exhibits, the ones we have now, loaded --

01:39 15 they'll be loaded. The ones that are not loaded will be in

01:39 16 paper but they'll be available.

01:39 17 You all will need to do whatever magic you all need to do

01:39 18 to make sure they have all the exhibits physically available.

01:39 19 But because of that, whenever we finish today, I'm going to

01:39 20 tell them to go home. That way they won't begin deliberating

01:39 21 until they have all the exhibits.

01:39 22 So that being said, we have two issues to take up.

01:39 23 Mr. Chu, I'll begin with you or whoever's going to be speaking

01:39 24 on behalf of how we submit the damages.

01:39 25 Oh, yes, ma'am.

01:39 1 MS. PROCTOR: For the jury instructions?

01:39 2 THE COURT: Yes.

01:39 3 MS. PROCTOR: So, Your Honor, on the comparable license  
01:40 4 instruction that's No. 33.

01:40 5 THE COURT: Okay.

01:40 6 MS. PROCTOR: Is it 33 -- or is it 34? 34 in yours, I  
01:40 7 think, now.

01:40 8 So on 34, the comparable license issue, basically there  
01:40 9 are two competing instructions. There's -- we proposed about a  
01:40 10 paragraph; they proposed a longer instruction. And there are  
01:40 11 two primary issues with what they have proposed.

01:40 12 THE COURT: Okay.

01:40 13 MS. PROCTOR: A lot of it overlaps. But theirs is -- it's  
01:40 14 a good bit longer, and one of the things it includes that ours  
01:40 15 does not is a discussion of an analogy to a house and  
01:40 16 determining the value of a house.

01:40 17 And we just think that's improper, especially in light of  
01:40 18 the analogies that their expert used. We don't want the Court  
01:40 19 to be endorsing those kinds of comparisons.

01:40 20 THE COURT: I will tell you that I felt the same way  
01:40 21 when -- after I heard -- I mean, I was agnostic when I read  
01:40 22 both of them. I wasn't sure what the issue was. But having  
01:40 23 heard the way that Intel put on their damages -- that, I  
01:41 24 thought seemed inappropriate, given the analogy that they used.  
01:41 25 I'll hear from counsel for Intel. But that -- that's my issue.

01:41 1 MR. TOMPROS: I think, Your Honor, at the end of the day  
01:41 2 we could live without the house analogy, and that's okay, Your  
01:41 3 Honor.

01:41 4 THE COURT: Okay.

01:41 5 MS. PROCTOR: Great. And so there's one other issue that  
01:41 6 we think our instruction addresses more clearly here. And that  
01:41 7 is the standard and the fact that the licenses have to actually  
01:41 8 be comparable in order to be relevant. And so our instruction  
01:41 9 includes the sentence, it's sort of near the end here, that if  
01:41 10 they choose to rely upon evidence from any license agreements,  
01:41 11 you must account for any differences between those licenses and  
01:41 12 the hypothetically negotiated license. It goes on, in terms of  
01:41 13 the technologies' economic circumstances.

01:41 14 THE COURT: Okay. Let me -- I don't mean to cut --  
01:41 15 ordinarily I wouldn't cut you off. I've just -- for Intel, if  
01:41 16 I were to give Intel's instruction minus the house analogy and  
01:42 17 added the sentence that said -- began with, "However," to the  
01:42 18 end of it or wherever, would Intel be okay with that?

01:42 19 MR. TOMPROS: That would be fine, Your Honor.

01:42 20 THE COURT: And I'm going to put it at the end unless you  
01:42 21 all tell me that there's -- someone's unhappy about that.

01:42 22 MS. PROCTOR: So I do still have one final concern with  
01:42 23 this one, before we get to the part about settlements, which we  
01:42 24 can address in a moment. And that's just that it's a very long  
01:42 25 instruction already, if we use theirs. And, especially, if you

01:42 1 now add a big chunk of ours --

01:42 2 THE COURT: You're going to have a hard time -- it's  
01:42 3 47 pages -- convincing me that --

01:42 4 MS. PROCTOR: I hear you, Your Honor.

01:42 5 THE COURT: So here's what I'm going to do on 34. I'm  
01:42 6 going to give Intel's proposal. What I want someone to do is  
01:42 7 make sure with -- I act like I know what I'm talking about  
01:42 8 here. When you say -- when one side says, I want this removed,  
01:42 9 make sure Evan knows what it is you want removed and that  
01:42 10 you've agreed to. I'm okay with that.

01:42 11 And then we'll take the sentence how -- beginning with,  
01:43 12 "however," if you choose, that's in red, and we will put that  
01:43 13 at the end of the blue language, and that will be this  
01:43 14 instruction.

01:43 15 MR. TOMPROS: Thank you, Your Honor.

01:43 16 THE COURT: And so then we're turning to --

01:43 17 MS. PROCTOR: Can I just -- sorry -- clarify one little  
01:43 18 thing? Are you -- for that last bit that they proposed on  
01:43 19 litigation-related agreements, are you planning to include that  
01:43 20 or not? Because, obviously we don't think that's appropriate,  
01:43 21 and I can explain why.

01:43 22 THE COURT: Yeah. I'm sorry. I missed that. I mean, I  
01:43 23 missed that when I read this.

01:43 24 I'm not going to -- again, I'm not going to include  
01:43 25 anything that has to do with being influenced by a desire to

01:43 1 avoid the cost of further litigation.

01:43 2 MR. TOMPROS: May I be heard on that?

01:43 3 THE COURT: Yes, sir.

01:43 4 MR. TOMPROS: I would just say, Your Honor, this is an  
01:43 5 instruction that we only proposed in the alternative, as you  
01:43 6 can kind of see there, because our view was that licenses that  
01:43 7 were the product of litigation should not be introduced at all.

01:44 8 As you heard during the examination this morning -- the  
01:44 9 cross-examination this morning, Mr. Mueller objected precisely  
01:44 10 to those, asked for and got a standing objection to those,  
01:44 11 which Your Honor overruled.

01:44 12 Now there is evidence in the record of licenses that are  
01:44 13 driven by litigation that have different numbers. The Court  
01:44 14 in -- the Federal Circuit in the Prism case made very clear  
01:44 15 that those are different and the litigation impact of those  
01:44 16 must be considered.

01:44 17 And this instruction that we proposed is directly from the  
01:44 18 Federal Circuit Bar Association model instruction B59. That's  
01:44 19 where that paragraph comes from. If they hadn't been in the  
01:44 20 case at all, of course there'd be no need for an instruction.  
01:44 21 But having overruled that objection, we do think it's necessary  
01:44 22 to instruct.

01:44 23 THE COURT: Yes, ma'am.

01:44 24 MS. PROCTOR: So the instruction they have in there is  
01:44 25 very one-sided. And, of course, we have to take into account

01:44 1 the facts that are actually in the case. And so the facts that  
01:45 2 actually came into evidence, Your Honor, are about settlement  
01:45 3 agreements where the values are very high, 300 million,  
01:45 4 1.5 billion. These are not agreements that are trying to avoid  
01:45 5 the cost and burden of litigation, right? There's more to it  
01:45 6 than -- than that.

01:45 7 And, in fact, we think Your Honor has prevented us from  
01:45 8 talking about the fact that the low lump sum agreements Intel  
01:45 9 is relying on are actually the ones that are being influenced  
01:45 10 by litigation. But because we have not been able to make that  
01:45 11 argument, we think that this one-sided jury instruction should  
01:45 12 not be included.

01:45 13 THE COURT: Okay. Just give me one second.

01:46 14 See, so I don't even think this is necessarily accurate  
01:46 15 because it might -- I think what I heard also is that you might  
01:46 16 do this to avoid litigation at all. And so that -- that is my  
01:46 17 problem here. But give me a second to think.

01:46 18 MR. TOMPROS: Happy to address that, Your Honor.

01:46 19 THE COURT: Yes, sir.

01:46 20 MR. TOMPROS: I would say that the instruction actually --  
01:46 21 I -- it is -- it's the model language and it is trying to  
01:46 22 encompass a series of different scenarios. But I do think it  
01:46 23 is -- it does encompass the scenario that was addressed both by  
01:47 24 Mr. Sullivan's cross-examination and, frankly, what we expect  
01:47 25 VLSI will put on through Mr. Chandler, the last -- the last

01:47 1 witness, who addresses litigation settlement agreement.

01:47 2 The first point I would say, it specifically says "may  
01:47 3 consider," right? So this is an additional factor about a  
01:47 4 license that the jury may consider. And the second --

01:47 5 THE COURT: But -- yeah. But here's my problem is is this  
01:47 6 is focusing the jury on one of the other things that might be  
01:47 7 considered. And it seems to me that it does skew towards  
01:47 8 Intel's benefit that this is the one that I singled out, is the  
01:47 9 problem I'm having.

01:47 10 MR. TOMPROS: And, Your Honor, we agree that it is one of  
01:47 11 several considerations. And I do think that the absence of it,  
01:47 12 though, is -- skews the other direction, right? Not -- not  
01:47 13 instructing the jury that when something is part of a  
01:47 14 litigation, its value can be and should be adjusted because of  
01:47 15 that. And I think that skews the other direction.

01:47 16 That was exactly the problem with that Prism case, the  
01:47 17 Federal Circuit case from 2017.

01:47 18 So there's very clear law that the fact that a license was  
01:48 19 the result of litigation affects it economically.

01:48 20 THE COURT: Here's what I'm going to do. I'm going to  
01:48 21 give this sentence to the point where it says, "When  
01:48 22 determining if a license agreement is comparable to" -- "the  
01:48 23 hypothetical to" -- "the hypothetical license, you may consider  
01:48 24 whether the license agreement is between" -- is -- I'm going to  
01:48 25 say "is" or "was between parties who are involved in a

01:48 1 lawsuit."

01:48 2 I'm going to stop there, and I'm going to -- as I said  
01:48 3 earlier, with the concern Mr. Chu raised that if there's  
01:48 4 something in the record that I admitted that either side wants  
01:48 5 to discuss related to these license agreements, you can do so.  
01:48 6 If it's -- if I've admitted it in the record, I just don't want  
01:48 7 you to -- I don't want either side to be able to point where --  
01:49 8 where I say -- where you can say, look, the judge tells you  
01:49 9 this.

01:49 10 I don't want there to be the weight of judicial imprimatur  
01:49 11 on any one specific issue. But you all are free in your  
01:49 12 closing to discuss anything related to this that has been  
01:49 13 admitted into evidence. And so that will take care of that, I  
01:49 14 hope.

01:49 15 And then the lump sum versus a running royalty. We need  
01:49 16 to wrap this up pretty quickly, but let me start with  
01:49 17 plaintiff's counsel.

01:49 18 MS. PROCTOR: Thank you, Your Honor. So we have a concern  
01:49 19 with this that also relates to the verdict form, and they've  
01:49 20 actually proposed a final question that says, are you awarding  
01:49 21 a lump sum for past and future damages or just a running  
01:49 22 royalty for past damages.

01:49 23 THE COURT: I've seen that.

01:49 24 MS. PROCTOR: So that's really our concern. We don't want  
01:49 25 to instruct the jury on this because we think that verdict form

01:49 1 question is improper. It is -- as you heard on Friday night,  
01:49 2 the parties have agreed that the financial data Intel produced  
01:50 3 only goes through December 31st, 2019. We do not have  
01:50 4 financial data beyond that and --

01:50 5 THE COURT: But I never heard Dr. Sullivan mention a  
01:50 6 running royalty.

01:50 7 MS. PROCTOR: Oh, he absolutely -- his testimony was --  
01:50 8 it's built on a foundation of a running royalty, right? He --

01:50 9 THE COURT: Well, it is, kind of.

01:50 10 MS. PROCTOR: He tied it over and over again -- and  
01:50 11 that -- so sorry.

01:50 12 THE COURT: It is, kind of. I'm not really sure how to  
01:50 13 accurately describe Dr. Sullivan's testimony. It certainly  
01:50 14 seemed more like he came up with a lump sum to me than a  
01:50 15 running royalty.

01:50 16 MS. PROCTOR: And, Your Honor, that's actually exactly  
01:50 17 part of the problem here. Because what he did is it -- he said  
01:50 18 he was calculating it based on the use Intel made but only for  
01:50 19 certain dates, right? And so it is a running royalty, but he's  
01:50 20 calculated it as a lump sum.

01:50 21 And so it's just extremely confusing to the jury. We give  
01:50 22 them a line for a lump sum, and then we ask them whether it's a  
01:50 23 lump sum or a running royalty. It's not understandable for the  
01:51 24 jury.

01:51 25 And it also implicates our legal rights. We think these

01:51 1 are equitable questions about whether we get an ongoing  
01:51 2 royalty, for example, postjudgment.

01:51 3 THE COURT: I understand what the problem is. But what  
01:51 4 I'm saying is, what I heard Dr. Sullivan say was whatever --  
01:51 5 however he said he got there, the way I heard -- I think you  
01:51 6 accurately quoted it, which was "I'm giving a lump sum for the  
01:51 7 damages that our guys have incurred because of past  
01:51 8 infringement."

01:51 9 But that -- that's the language he used. That's the  
01:51 10 reason we had the whole fight over royalty rate per unit.

01:51 11 And so I'm -- my fear is the opposite of yours. I get why  
01:51 12 there may be a problem with what happens if you win, and if the  
01:51 13 plaintiff comes in and says, you know, we ought to get more  
01:51 14 money for -- going forward. I had one of these cases as a  
01:51 15 plaintiff. I'm -- I get it.

01:52 16 But your -- the evidence in the case, the testimony from  
01:52 17 your witness basically said, here's a lump sum amount.

01:52 18 MS. PROCTOR: For a certain period, Your Honor. So it  
01:52 19 absolutely is a running royalty for that period.

01:52 20 THE COURT: Okay. Well, it is a running royalty for a  
01:52 21 period that's given in a lump sum.

01:52 22 MS. PROCTOR: Yes. And that's part of the issue with the  
01:52 23 instruction they want to give, because it will not be  
01:52 24 understandable in light of that.

01:52 25 And that was in part to accommodate the verdict form as

01:52 1 well. We wanted to have a single number -- the parties had  
01:52 2 already agreed on the portion of the verdict form that would  
01:52 3 just be a line with a dollar amount.

01:52 4 And so we wanted to give the jury the number they needed  
01:52 5 for that line. But of course it is based on a running royalty,  
01:52 6 and Intel does not dispute that it only goes through those  
01:52 7 financial data they provided through December 31st, 2019.

01:52 8 THE COURT: No. I --

01:52 9 MR. TOMPROS: I mean, respectfully, Your Honor, we don't  
01:52 10 dispute that the financial data goes there. But I think as --  
01:52 11 this is part of why this instruction makes a whole lot more  
01:53 12 sense after you've seen our damages clarification.

01:53 13 As you heard today, our view is that the appropriate  
01:53 14 reasonable royalty would be a comparable royalty for a fully  
01:53 15 paid-up license, like was discussed today. And that is  
01:53 16 precisely a lump sum.

01:53 17 It's been the position we've taken throughout the case,  
01:53 18 and it's absolutely in the record as of today. And this idea  
01:53 19 of a per-unit royalty was, you know, as you heard, what Mr. Lee  
01:53 20 objected to before.

01:53 21 THE COURT: Well, that's not going to really be a problem  
01:53 22 here, I don't think.

01:53 23 MR. TOMPROS: I agree.

01:53 24 THE COURT: Because I don't -- but the language we choose  
01:53 25 here, given the way this was put on, is -- it is -- I want to

01:53 1 protect Intel, and so I definitely want to allow you all to  
01:53 2 argue the -- based on what your expert said.

01:53 3         But the way the plaintiff's case was put on, I'm not sure  
01:53 4 that the first line of your instruction, "a reasonable royalty  
01:54 5 can be paid either in the form of a one-time lump sum payment  
01:54 6 or as a running royalty," in that they did present it, the  
01:54 7 running royalty, and again, what they did was they came up with  
01:54 8 the lump sum amount that they thought was appropriate.

01:54 9         And I -- you know, I went back today, as your damages  
01:54 10 expert was testifying, to make sure -- I thought I'd done the  
01:54 11 right thing when you all -- and I'm sure -- if the plaintiff  
01:54 12 wins, I'm sure three other people will decide whether I did or  
01:54 13 not. But I went back and verified for my own comfort that  
01:54 14 there is an economic -- an established economic methodology  
01:54 15 that supports Dr. Sullivan.

01:54 16         Now, whether that -- whether it should come in in a patent  
01:54 17 case or not, I guess we may find out. I am comfortable that  
01:54 18 the methodology that he employed is something that is  
01:55 19 recognized in economic theory. Whether or not it's appropriate  
01:55 20 to use it for patent cases or not, you know, we're going to --  
01:55 21 I guess we'll have to see.

01:55 22         And so -- which makes Daubert, as you know, very hard  
01:55 23 because the plaintiff, I thought, did a very good job of taking  
01:55 24 an established methodology -- recognized established  
01:55 25 methodology and then buttressing it with the evidence from the

01:55 1 technical experts here to say, here's how I'm getting to that.

01:55 2 So I thought both the method and the methodology used  
01:55 3 survived Daubert. But here, I guess I'm paying the price for  
01:55 4 this by having to figure out how to phrase the charge to the  
01:55 5 jury.

01:55 6 MR. TOMPROS: Your Honor, I would just add, obviously you  
01:55 7 heard our arguments on Daubert on exactly this issue. And we  
01:55 8 agree that this is a new and different version that the  
01:56 9 plaintiff has put forward of a damages theory.

01:56 10 The theory that Intel has put forward, we think, is  
01:56 11 actually pretty standard. And that's why this is a standard  
01:56 12 instruction in the --

01:56 13 THE COURT: I personally have put on exactly the damage  
01:56 14 case that you put on this morning other times. So I recognize  
01:56 15 that one. I totally get that one. So give me one second here.

01:56 16 Okay. Here's what I'm going to do. I'm going to -- I'm  
01:57 17 not going to give the first sentence of the Intel suggestion.  
01:57 18 I'm going to take -- I'm going to skip over that paragraph for  
01:58 19 a second.

01:58 20 I'm going to start off with "reasonable royalty awards."  
01:58 21 I'm going to give the -- Intel's second paragraph will be the  
01:58 22 first paragraph. Then it will say, "Reasonable royalty awards  
01:58 23 may take the form of a running royalty." That will be the  
01:58 24 second paragraph.

01:58 25 The third paragraph will be the one submitted by VLSI.

01:58 1 And then I'm going to take the two sentences from the first  
01:58 2 paragraph, I'm going to insert them as a final paragraph in  
01:58 3 this.

01:58 4 So the last paragraph will read, any -- "all of these  
01:58 5 methods are designed to compensate the patent owner for any  
01:59 6 infringement. It is up to you, based on the evidence, to  
01:59 7 decide what type of royalty, if any, is appropriate in this  
01:59 8 case."

01:59 9 And under this, the plaintiff will be able to argue what  
01:59 10 Dr. Sullivan submitted and Intel can certainly argue based on  
01:59 11 this what its expert submitted.

01:59 12 Do we have anything else we need to take up?

01:59 13 MR. TOMPROS: We would like to put our objections on the  
01:59 14 record.

01:59 15 THE COURT: Of course. I'm sorry. Oh, we also need to  
01:59 16 take up the verdict form as well.

01:59 17 MS. PROCTOR: Yes, Your Honor.

01:59 18 THE COURT: So give me one second. So I'm going to  
01:59 19 start with the plaintiff's verdict form in terms of formatting.  
01:59 20 Doesn't mean I -- and so -- so I've got plaintiff's form.  
02:00 21 I'm -- let me just walk through this, and I'll ask counsel for  
02:00 22 Intel to tell me, on Page 1 --

02:00 23 MR. TOMPROS: I may be able to shortcut it considerably,  
02:00 24 Your Honor.

02:00 25 THE COURT: Yes, please.

02:00 1 MR. TOMPROS: I think we would be willing to agree with  
02:00 2 plaintiff's form with the exception of the addition of the lump  
02:00 3 sum checkbox that we described before. Again, with the caveat  
02:00 4 that we are preserving our prior objections on willfulness and  
02:00 5 equivalence.

02:00 6 THE COURT: Sure. No. Right now, all we're talking about  
02:00 7 is formatting.

02:00 8 MR. TOMPROS: Yep.

02:00 9 THE COURT: And so I'm not -- let the record be clear, and  
02:00 10 you'll get to do this formally in a few seconds where you  
02:00 11 actually put on the record your objections. But for right now,  
02:00 12 in terms of format, let's go on the record with -- tell me  
02:00 13 again what Intel is unhappy with.

02:00 14 MR. TOMPROS: That -- specifically that at the end of the  
02:00 15 plaintiff's form, there is not the question that we have  
02:00 16 proposed, which is the one that Ms. Proctor was just discussing  
02:01 17 with you, which is, is the total amount you found in this  
02:01 18 question a one-time lump sum for past and future sales or a  
02:01 19 royalty for past sales only? Check one, one-time lump sum or  
02:01 20 reasonable royalty.

02:01 21 So our question for 1b, we would propose --

02:01 22 THE COURT: Let me throw this out. And again, when I ask  
02:01 23 you this, I'm preserving Intel's objection to all of this.  
02:01 24 We're talking formatting now because I want to preserve this.

02:01 25 Given that I have given an alternative that wasn't

02:01 1 followed by the -- Intel, what if on the verdict form it was --  
02:01 2 the -- instead of just -- let me find it real quick. Sorry.

02:02 3 Oh, let me digress for just a second. On Intel's form, on  
02:02 4 Page 6, I think Intel included, but the plaintiff did not, the  
02:02 5 language that -- it comes right under the title "Damages,"  
02:02 6 where it says, you know, you have to find something is  
02:02 7 infringed and not invalid. I think that that ought to be  
02:02 8 included.

02:02 9 Does the plaintiff have an objection to that?

02:02 10 MS. PROCTOR: We do object to that, Your Honor. We think  
02:02 11 ours is clear based on the question flow.

02:02 12 THE COURT: Where do you have a -- where -- let me make  
02:02 13 sure you understand what I'm saying.

02:02 14 MR. TOMPROS: Yeah. If I may, Your Honor. I think  
02:02 15 Ms. Proctor and I may actually be saying the same thing. So  
02:03 16 their Questions No. 6 and 7, in the body of the question, it  
02:03 17 just says, answer it if you found yes to Question No. 1 --

02:03 18 MS. PROCTOR: Thank you. That is correct.

02:03 19 MR. TOMPROS: So that's why we didn't have a problem with  
02:03 20 their version. But if Your Honor wants to --

02:03 21 THE COURT: No, no, no. I just wanted to make sure it was  
02:03 22 in there. And so that's fine. Okay.

02:03 23 So turning to what hopefully is the final -- is the final  
02:03 24 issue. Give me just one second here.

02:03 25 I wish I could look up to the clock on the wall and know

02:03 1 what time it is.

02:03 2 MS. PROCTOR: 2:03, Your Honor.

02:03 3 And we're happy to take -- obviously preserving our  
02:03 4 objection to this question about the lump sum, we're happy to  
02:03 5 take a shot at adding it to our form in a way that makes  
02:04 6 logical sense.

02:04 7 THE COURT: No. I'm doing that right now.

02:04 8 MS. PROCTOR: We would ask, then, that Your Honor put in  
02:04 9 parentheses next to one-time lump sum "for Intel," next to  
02:04 10 royalty for past sales "for VLSI," as we've done for other  
02:04 11 questions for clarity for the jury.

02:04 12 THE COURT: I'm not going to -- I'm coming up with another  
02:04 13 option.

02:04 14 MS. PROCTOR: Oh, okay.

02:05 15 THE COURT: I'll start with the plaintiff.

02:06 16 Here's what I'm suggesting we ask, which I think is  
02:06 17 consistent with the way you all are going to present your  
02:06 18 arguments, is the total amount of damages you found in  
02:06 19 Questions 6 and 7, one, a running royalty in the form of a lump  
02:06 20 sum for past damages or, two, a lump sum for all damages?

02:06 21 MR. TOMPROS: No objection from Intel, Your Honor.

02:06 22 MS. PROCTOR: Can we just clarify, Your Honor, with a  
02:06 23 parenthetical which one is for VLSI and which one is for Intel?

02:06 24 THE COURT: No.

02:06 25 MS. PROCTOR: Your Honor, we're just really concerned it's

02:06 1 going to create jury confusion. Because we really -- obviously  
02:06 2 everyone's goal is to have a consistent verdict --

02:06 3 THE COURT: Let me -- I get that. But let me suggest that  
02:06 4 during closing argument, you can certainly say to the jury that  
02:07 5 you believe that the appropriate method to use is a reasonable  
02:07 6 royalty in the form of a lump sum for past damages.

02:07 7 MS. PROCTOR: It's going to be a long night, Your Honor.  
02:07 8 I don't know how much the jurors are going to remember, and I  
02:07 9 think it's just cleaner to let them have that in front of them.

02:07 10 THE COURT: I'm going to allow you all to argue it however  
02:07 11 you want to argue it. I'm not going to let them pick a format  
02:07 12 because they want one side or the other to win.

02:07 13 And so they -- if -- they get to -- they get to decide  
02:07 14 which format they think is appropriate. You all can make clear  
02:07 15 in your closing arguments which you think is appropriate.

02:07 16 And so I'm not restricting VLSI in any way from saying,  
02:07 17 "We believe that the correct answer in the judge's instruction  
02:07 18 should be a reasonable royalty in the form of a lump sum for  
02:07 19 past damages."

02:07 20 And if the jury can't figure out that -- which side wants  
02:08 21 what, then we're lost anyway.

02:08 22 MS. PROCTOR: Okay. I understand, but I'll also just note  
02:08 23 that we maintain our objection to the jury deciding future  
02:08 24 damages at all.

02:08 25 THE COURT: They're not -- well, okay. I got that. But

02:08 1 there is -- but the way that -- here's the problem, is the  
02:08 2 defendant has presented a model where they said the appropriate  
02:08 3 amount is a lump sum that gives us the freedom to use this now  
02:08 4 and forever. So that is a -- that is an answer that's  
02:08 5 supported by the evidence.

02:08 6 MS. PROCTOR: And we think it's contrary to law, Your  
02:08 7 Honor, for them to be able to extinguish our equitable rights  
02:08 8 in the future.

02:08 9 THE COURT: Well, you have no equitable rights. You have  
02:08 10 no equitable rights. You have -- in this case, you have rights  
02:08 11 only to damages because you're not a practicing entity.

02:08 12 MS. PROCTOR: Well, we could certainly seek an injunction.  
02:08 13 And if that were denied, we could --

02:08 14 THE COURT: How would you seek an injunction?

02:09 15 MS. PROCTOR: We could file the motion is what I mean,  
02:09 16 Your Honor. And then there's an alternative of an ongoing  
02:09 17 royalty that absolutely is available. It's an equitable remedy  
02:09 18 to nonpracticing entities.

02:09 19 THE COURT: But they present -- I'm not going to argue too  
02:09 20 much longer. They -- they will have presented to the jury  
02:09 21 evidence that says the appropriate amount of the use is this,  
02:09 22 and for that -- I've made clear on my record why I'm doing it.  
02:09 23 So -- and that I'm doing it is either right or wrong. It  
02:09 24 doesn't get better or worse because I add VLSI in one place and  
02:09 25 Intel in the other.

02:09 1 I'm either -- if I'm wrong for allowing Dr. Sullivan to  
02:09 2 have put on this -- this methodology, we'll find out in the  
02:09 3 future.

02:09 4 If I'm wrong for having allowed Intel to say it's a lump  
02:09 5 sum and it's this amount, we'll find out in the future. I'm  
02:09 6 just going to -- I'm doing the best I can right now to -- to  
02:09 7 give a jury charge that is faithful to what the evidence was in  
02:09 8 the case.

02:10 9 MS. PROCTOR: Understood, Your Honor.

02:10 10 THE COURT: So assuming that I put in here -- what I'm  
02:10 11 going to add to -- I'm going to add a question to the  
02:10 12 plaintiff's -- everything else will be the same. Everything  
02:10 13 will be the -- as the plaintiff gave it to me, with the  
02:10 14 exception there will be a new Page 7, which will read, "Is the  
02:10 15 total amount of damages you found in Questions 6 and 7, one, a  
02:10 16 running royalty in the form of a lump sum for past damages  
02:10 17 only; or, two, a lump sum for all damages?"

02:10 18 And I understand you're going to -- you're unhappy about  
02:10 19 that. But let me -- I just need to have Evan --

02:10 20 Evan, can you add that?

02:10 21 LAW CLERK: Yes.

02:10 22 THE COURT: So why don't we go ahead now, and whoever's  
02:10 23 going to make the objections to my charge on behalf of  
02:10 24 plaintiff, please do so. Please do it as quickly as you can  
02:11 25 just so we can bring the jury back in.

02:11 1 MS. PROCTOR: Thank you, Your Honor.

02:11 2 MR. HATTENBACH: Good afternoon, Your Honor.

02:11 3 THE COURT: No stall points here.

02:11 4 MR. HATTENBACH: No. I'm going to try to make this as  
02:11 5 quick as possible. I don't know exactly what form you want it  
02:11 6 in, so let me try this and make sure -- if it doesn't work for  
02:11 7 you, I can do a more detailed version.

02:11 8 There are a number of jury instructions that we object to  
02:11 9 as unduly prejudicial, misstating the law and the record, and  
02:11 10 confusing. And those are the ones with --

02:11 11 THE COURT: You left out "respectfully" somewhere in  
02:11 12 there.

02:11 13 (Laughter.)

02:11 14 MR. HATTENBACH: I --

02:11 15 THE COURT: You should say either "respectfully" or "with  
02:11 16 all due respect."

02:11 17 MR. HATTENBACH: I -- I apologize. I did draw the short  
02:11 18 straw. I have not been looking forward to this all week, as my  
02:11 19 colleague said about reading the exhibits into the record. But  
02:11 20 the ones that we object to on that basis are portions of  
02:11 21 instructions 2, 3, 11, 13, 16, 17, 21, 22, 24, 25, 27 through  
02:12 22 29, 30, 32 through 34, and 35.

02:12 23 We also object to the noninclusion of certain material  
02:12 24 that we requested to be included in instructions 4, 15, 19, 20  
02:12 25 and 35. And if you would like any more detail, I'd be glad --

02:12 1 THE COURT: As long as Intel -- and this is bilateral. As  
02:12 2 long as -- we had your proposals. I think you've faithfully  
02:12 3 articulated what your proposals were. But if someone's just  
02:12 4 out there listening to what you said, they'd feel like I really  
02:12 5 screwed this up. That was a lot of objecting. But --

02:12 6 MR. HATTENBACH: Right. But I'm referring to material  
02:12 7 that we've discussed with Your Honor, I believe it was Thursday  
02:12 8 night in a document that had red type and blue type,  
02:12 9 signifying --

02:12 10 THE COURT: Oh, no. No. No. I -- I'm good with that.

02:12 11 MR. HATTENBACH: Okay.

02:12 12 THE COURT: I think the way you did it is fine. And we  
02:12 13 went over each of the -- each of the pages that you submitted.  
02:13 14 And I -- I -- I either refused to give those proposals, or I  
02:13 15 gave -- or I gave proposals that you're unhappy with. That's  
02:13 16 fine with me.

02:13 17 MR. HATTENBACH: That's all I have. Thank you, Your  
02:13 18 Honor.

02:13 19 THE COURT: Thank you, sir.

02:13 20 And for Intel?

02:13 21 MR. TOMPROS: Thank you, Your Honor. On behalf of Intel,  
02:13 22 we respectfully and very respectfully object --

02:13 23 (Laughter.)

02:13 24 MR. TOMPROS: -- under Rule 51(c) to the following  
02:13 25 instructions: 2 through 4, 13 through 15, 17 through 24, 29

02:13 1 through 35 and the verdict form, on the basis that they are  
02:13 2 contrary to law and consistent with the evidence in the case  
02:13 3 and/or unduly prejudicial for the reasons we have previously  
02:13 4 stated.

02:13 5 We'll also provide the Court with a chart of our specific  
02:13 6 objections and alternatives prior to the charge.

02:13 7 Thank you, Your Honor.

02:13 8 THE COURT: Sounds to me like you are equally unhappy with  
02:13 9 me which hopefully means I did a decent job.

02:14 10 So what we're going to do now is I'm going to take a short  
02:14 11 break. Here, let me do this. I'm just trying to figure out  
02:14 12 from you all's perspective. We're going to have a witness,  
02:14 13 short witness. I always used to -- the judge I clerked for  
02:14 14 always used to make a joke about, "Oh, is it a short witness?"  
02:14 15 I haven't done that yet.

02:14 16 But -- and then I'll allow you all to tell me if you would  
02:14 17 like to take a short break after I read the charge so that we  
02:14 18 can roll through the entire closing. I'm happy to do that as  
02:14 19 well.

02:14 20 But my suggestion is we bring the jury in. We finish with  
02:14 21 the witness. I read the charge. And then we take a short  
02:14 22 break. Unless -- but I'm -- if any of you want -- need a break  
02:14 23 in some other way so that we can get through the closing  
02:14 24 arguments without taking one, just let me know. So we'll stand  
02:14 25 in recess for only about five minutes. But take whatever break

02:14 1 you need and we'll come back in.

02:15 2 THE BAILIFF: All rise.

02:15 3 (Recess taken from 2:15 to 2:23.)

02:23 4 THE BAILIFF: All rise.

02:23 5 THE COURT: Please remain standing for the jury.

02:23 6 (The jury entered the courtroom at 2:23.)

02:23 7 THE COURT: Thank you. You may be seated.

02:23 8 If you would give me one second.

02:23 9 Mr. Chu?

02:23 10 MR. CHU: Thank you very much, Your Honor.

02:23 11 Good afternoon, ladies and gentlemen. I have the pleasure  
02:23 12 of introducing to you Charlotte Wen who's going to be  
02:23 13 questioning the closing witness for our trial. I had the great  
02:24 14 pleasure of meeting Ms. Wen when she was a summer intern at our  
02:24 15 law firm.

02:24 16 MS. WEN: Good afternoon, everyone. My name is Charlotte  
02:24 17 Wen.

02:24 18 DIRECT EXAMINATION

02:24 19 BY MS. WEN:

02:24 20 Q. And now that I've introduced myself, Mr. Chandler,  
02:24 21 could you please introduce yourself to the jury?

02:24 22 A. Yes. Hi. My name is Mark Chandler. I'm managing  
02:24 23 director of Upstream Partners. We're an intellectual property  
02:24 24 consulting firm.

02:24 25 Q. And have you prepared any slides for your testimony

02:24 1 today?

02:24 2 A. Yes. I have.

02:24 3 Q. Can you tell the jury a little bit about your  
02:24 4 educational background?

02:24 5 (Brief off-the-record discussion.)

02:24 6 (The witness was sworn.)

02:24 7 BY MS. WEN:

02:25 8 Q. So let's try that again. Could you please introduce  
02:25 9 yourself to the jury?

02:25 10 A. Yes. My name is Mark Chandler. I'm managing  
02:25 11 director of Upstream Partners. We're an intellectual property  
02:25 12 consulting firm.

02:25 13 Q. Have you prepared slides for your testimony today?

02:25 14 A. Yes. I have.

02:25 15 Q. And could you tell the jury a bit about your  
02:25 16 educational background?

02:25 17 A. Yes. I earned my bachelor's degree in electrical  
02:25 18 engineering from Bucknell University. And I earned my MBA from  
02:25 19 the Wharton School of the University of Pennsylvania.

02:25 20 Q. Do you have any other credentials?

02:25 21 A. Yes. I have the credential of a certified licensing  
02:25 22 professional, and that is accredited by the Licensing Executive  
02:25 23 Society.

02:25 24 I've also been recognized by my peers as one of the top IP  
02:25 25 strategists -- top 300 IP strategists for intellectual asset

02:25 1 management for the -- in the first year they compiled that list  
02:25 2 in 2010, all the way through last year, 2020. For every year.

02:25 3 Q. And how long have you worked in intellectual property  
02:25 4 licensing and valuation?

02:26 5 A. I've been licensing patents and valuing intellectual  
02:26 6 property for about 25 years now.

02:26 7 Q. Has any of that work involved the semiconductor  
02:26 8 industry?

02:26 9 A. Yes. Much of that has been in semiconductors and  
02:26 10 electronics.

02:26 11 Q. And have you ever personally negotiated a patent  
02:26 12 license?

02:26 13 A. Yes. I license patents -- negotiate licenses on a  
02:26 14 weekly basis. I've over my career negotiated well over 100  
02:26 15 patent licenses and other agreements. Across a full range of  
02:26 16 technologies. I've negotiated against large companies and  
02:26 17 small companies, providing them licenses.

02:26 18 In addition, I've negotiated four large companies, small  
02:26 19 companies, as well as universities, many of which you'll see  
02:26 20 here on the screen.

02:26 21 Q. And how many licensing agreements have you analyzed  
02:26 22 in your career?

02:26 23 A. Oh, well over 2,000 agreements.

02:26 24 MS. WEN: Your Honor, we offer Mark Chandler as an expert  
02:26 25 in patent licensing, acquisition and valuation.

02:26 1 MR. MUELLER: No objection, Your Honor.

02:27 2 THE COURT: You'll be so approved.

02:27 3 BY MS. WEN:

02:27 4 Q. Mr. Chandler, are you being compensated for the  
02:27 5 investigation that you performed in this case?

02:27 6 A. Yes. My firm is being compensated at my standard  
02:27 7 hourly rate of \$540 an hour.

02:27 8 Q. And does that compensation depend at all on your  
02:27 9 testimony, on your opinions or the outcome of this case?

02:27 10 A. No. Not at all.

02:27 11 Q. What is your role in this case?

02:27 12 A. I've been asked to review and analyze Intel's  
02:27 13 arguments with regard to patent licenses and patent acquisition  
02:27 14 agreements.

02:27 15 Q. Were you in the courtroom today for Mr. Huston's  
02:27 16 testimony?

02:27 17 A. Yes. I was here.

02:27 18 Q. Do you agree with Mr. Huston's opinions?

02:27 19 A. No. I completely disagree.

02:27 20 MS. WEN: So turning to PDX-6.4.

02:27 21 BY MS. WEN:

02:27 22 Q. At a high level, could you please explain why you  
02:27 23 disagree?

02:27 24 A. Yes. Well, in my opinion, Mr. Huston's analysis  
02:27 25 is -- is deeply flawed. And that's primarily because he's

02:27 1 failed to take into account the most important aspect that one  
02:27 2 needs to consider in a proper damages analysis. And that is  
02:28 3 the actual value of VLSI patents that Intel has received in its  
02:28 4 products.

02:28 5 In addition, you know, a second point, you heard  
02:28 6 Mr. Huston talk about, you know, five aspects of real-world  
02:28 7 evidence. Well, for each of those he's simply taken an amount  
02:28 8 of a transaction and divided by the number of patents. And not  
02:28 9 all patents are created equal. Each patent is its own unique  
02:28 10 invention and has its own unique value.

02:28 11 In addition, in none of this real-world evidence that  
02:28 12 Mr. Huston considered has taken into consideration the use of  
02:28 13 VLSI patents in actual real-world Intel products or the  
02:28 14 benefits that those patents have provided to those products or  
02:28 15 the sales of those products to real-world Intel customers.  
02:28 16 Dr. Sullivan has taken just an -- that kind of an approach.

02:28 17 Q. So why does the value of Intel's use of VLSI's  
02:28 18 patents matter?

02:28 19 A. Well, because it's the law. As we've heard in this  
02:29 20 trial, a patent gives the owner of the patent the right to  
02:29 21 exclude others from making products or selling products based  
02:29 22 upon their patent.

02:29 23 So the value of a patent is not necessarily confined to  
02:29 24 the use of -- made by that patent by the patent owner, but it  
02:29 25 must include -- it relates to value used by other parties.

02:29 1 And that's very clear in the statute that you need to  
02:29 2 account for Intel's use of the VLSI patents.

02:29 3 Q. And do you recall Mr. Huston's testimony about  
02:29 4 Freescale's acquisition of SigmaTel and Freescale's subsequent  
02:29 5 merger with NXP?

02:29 6 A. Yes. I do recall that.

02:29 7 Q. How does Mr. Huston's testimony about those  
02:29 8 transactions fail to account for Intel's use of VLSI's patents?

02:29 9 A. Well, those transactions were not about Intel. They  
02:29 10 were not about Intel's use of the VLSI patents. They did not  
02:30 11 take into account the value of the '373 patent or the '759  
02:30 12 patent, and they certainly didn't account for any use of those  
02:30 13 patents in Intel's products. So those transactions could not  
02:30 14 have captured the value of those patents to Intel.

02:30 15 Q. And do you recall Mr. Huston's testimony about  
02:30 16 various allegedly comparable agreements and offers?

02:30 17 A. Yes. I do.

02:30 18 Q. How does that testimony fail to account for the value  
02:30 19 of Intel's use of VLSI's patents?

02:30 20 A. Well, these 20 agreements and supposed offers that  
02:30 21 Mr. Huston referred to, for each of those agreements -- well,  
02:30 22 first of all, these agreements did not include and were not  
02:30 23 about the '373 patent or the '759 patent.

02:30 24 In addition, for those 20 agreements there's been no  
02:30 25 evidence submitted by Mr. Huston or Intel in this matter that

02:30 1 they ever used the patents in those agreements in any actual  
02:30 2 products by Intel.

02:30 3 And if you don't have any evidence of use in products, you  
02:31 4 can't possibly know anything about the value that any products  
02:31 5 are getting from those patents. So it can't be -- cannot be --  
02:31 6 couldn't have anything to do to relate to the value of the VLSI  
02:31 7 patents to Intel.

02:31 8 Q. Are there any other reasons that you disagree with  
02:31 9 Mr. Huston?

02:31 10 A. Yes. Mr. Huston has selected 20 agreements that are  
02:31 11 all for low lump sum payment amounts. But, in fact, he's  
02:31 12 cherry-picked these agreements from well over 300 agreements  
02:31 13 that have been produced by Intel in this matter, many of which  
02:31 14 have been for amounts of hundreds of millions of dollars, even  
02:31 15 billions of dollars.

02:31 16 Q. So taking a step back, what materials did you  
02:31 17 consider in reaching your conclusions?

02:31 18 A. Well, I have a slide that shows them. I certainly  
02:31 19 reviewed the patents, the sworn testimony, deposition of  
02:31 20 various parties, correspondence and background information,  
02:31 21 some legal documents. Before he had to leave for a medical  
02:32 22 issue, I spoke with Mr. Stolarski. I spoke with Dr. Conte on a  
02:32 23 number of matters.

02:32 24 In addition, I've read each of the 20 agreements that  
02:32 25 Mr. Huston has handed-picked, as well as the more than 300 that

02:32 1 have been produced by the parties in this matter.

02:32 2 Q. Now, we've heard a lot about so-called real-world  
02:32 3 licenses and offers from Mr. Huston. Are there ways in which a  
02:32 4 hypothetical negotiation differs from a negotiation in the real  
02:32 5 world?

02:32 6 A. Yes. There's many ways. You may have heard last  
02:32 7 week that one of the foundational rules of the hypothetical  
02:32 8 negotiation is both parties would acknowledge that the patents  
02:32 9 are both valid and being infringed.

02:32 10 In a real-world negotiation, this is often disputed. You  
02:32 11 know, a party seeking a license will rarely admit that a patent  
02:32 12 is valid and also rarely never admit that they are seeking a  
02:32 13 license.

02:32 14 In fact, we've heard in this case that Intel doesn't  
02:32 15 even -- didn't even look into whether it used the patents of  
02:32 16 those 20 agreements that the -- Mr. Huston referred to.

02:33 17 Secondly, both parties are assumed to be -- they  
02:33 18 understand the need to reach an agreement. So you have a  
02:33 19 willing licensee and you have a willing licensor.

02:33 20 In the real world, a company such as Intel can just simply  
02:33 21 refuse to reach an agreement, and then the patent owner is  
02:33 22 forced to take them to court to pursue a license.

02:33 23 MR. MUELLER: Your Honor, I object. It's the issue  
02:33 24 discussed this morning.

02:33 25 THE COURT: Overruled.

02:33 1 BY MS. WEN:

02:33 2 Q. Are there any other differences between a  
02:33 3 hypothetical negotiation and a real-world negotiation?

02:33 4 A. Yes. As we heard Dr. Sullivan mention last week,  
02:33 5 both parties would have complete access to the other parties'  
02:33 6 information.

02:33 7 So from a patent owner's perspective, they would have the  
02:33 8 full information on Intel's, you know, use of their patents,  
02:33 9 the benefits provided to the products and then the sales and  
02:33 10 profits being generated. So they'd be in a position to make a  
02:34 11 fully informed decision that reflects the actual value of  
02:34 12 the -- being made by the licensee of their patents.

02:34 13 Q. And how would having full access to information be  
02:34 14 helpful in a negotiation?

02:34 15 A. Well, it'd make all the difference in the world. You  
02:34 16 know, the hypothetical negotiation can be thought of as a card  
02:34 17 game which all the cards are face up on the table. So both  
02:34 18 sides would know where the other one stands.

02:34 19 MS. WEN: So, Mr. Simmons, if you could please pull up  
02:34 20 PDX-6.4.

02:34 21 BY MS. WEN:

02:34 22 Q. So I am referring to now to the categories of  
02:34 23 information that Mr. Huston talked about in Categories 3  
02:34 24 through 5. Do you recall when Mr. Huston discussed those, that  
02:34 25 evidence?

02:34 1 A. Yes. I do.

02:34 2 Q. And so turning to these allegedly comparable  
02:34 3 agreements and offers, as an initial matter, did any of these  
02:35 4 agreements and offers in Categories 3 through 5 involve the  
02:35 5 VLSI patents that are asserted at this trial?

02:35 6 A. No. None of them involved the patents.

02:35 7 Q. And you mentioned earlier that one major reason that  
02:35 8 you don't agree with Mr. Huston is because he doesn't account  
02:35 9 for the value of VLSI's patents to Intel. Do you remember  
02:35 10 that?

02:35 11 A. Yes. I do.

02:35 12 Q. Is it possible to analyze whether an agreement is  
02:35 13 economically comparable to the hypothetical license if you  
02:35 14 don't know whether the patents are being used in Intel's  
02:35 15 products?

02:35 16 A. No. Mr. Huston could not have conducted any sort of  
02:35 17 economic analysis on the licenses that he says are comparable  
02:35 18 because Intel hasn't identified any products that actually use  
02:35 19 those patents. So he could not have conducted that.

02:35 20 And if you don't have evidence of use of a patent in a  
02:35 21 product, then you don't have any evidence of the benefits and  
02:35 22 you certainly don't have any understanding of the value of  
02:35 23 those patents to Intel.

02:35 24 MS. WEN: And, Mr. Simmons, could we please have PDX-6.14?

02:36 25 BY MS. WEN:

02:36 1 Q. And is this a problem -- the problem that you've been  
02:36 2 describing, is that a problem with every single one of the  
02:36 3 agreements that Mr. Huston has identified?

02:36 4 A. Yes. Every single one.

02:36 5 MS. WEN: At this point, Your Honor, I think we'd like to  
02:36 6 go on the confidential record for Intel confidential  
02:36 7 information.

02:36 8 THE COURT: Okay. If anyone is in the courtroom who is  
02:36 9 not under the protective order, you'll need to step out for a  
02:36 10 few seconds.

02:36 11 MS. WEN: All right.

02:36 12 THE COURT: We'll also go off the public audio record.

02:36 13 MS. WEN: Thank you.

02:36 14 (Sealed proceedings.)

02:36 15 MS. WEN: At this point, we can go back on the public  
02:42 16 record, I believe.

02:42 17 THE COURT: Okay.

02:42 18 BY MS. WEN:

02:42 19 Q. And so what is missing from Mr. Huston's analysis of  
02:42 20 the agreements and offers that he's identified?

02:42 21 A. Well, he's identified, you know, a number of  
02:42 22 transactions, acquisitions and some agreements.

02:42 23 With regard to the acquisitions, you know, these  
02:42 24 acquisitions, these transactions, had nothing to do with Intel.  
02:42 25 And these transactions did not take into consideration anything

02:42 1 about the '373 or the '759 patent or their use and value  
02:43 2 provided to Intel.

02:43 3 And with regard to the so-called offers and the agreements  
02:43 4 that Mr. Huston has selected, these didn't involve the VLSI  
02:43 5 patents at all. As I mentioned, Intel has not submitted any  
02:43 6 evidence that it ever used the patents that were transacted in  
02:43 7 these agreements in real-world products.

02:43 8 And finally, you know, certainly these had nothing to do  
02:43 9 with the value that Intel has received from its using the '373  
02:43 10 and the '759 patents in their products.

02:43 11 Q. So in your opinion, are any of Mr. Huston's  
02:43 12 agreements or offers comparable to the licenses that would have  
02:43 13 resulted from the hypothetical negotiation here?

02:43 14 A. No. None of them are.

02:43 15 Q. And can you please summarize what the problems are  
02:43 16 with Mr. Huston's analysis?

02:43 17 A. The problem with Mr. Huston is he's taken an indirect  
02:43 18 approach to try to infer or -- or guess the value of the VLSI  
02:44 19 patents to Intel. And he's done so by referring to agreements  
02:44 20 that really have nothing to do with the patents and nothing to  
02:44 21 do with the value of those patents to Intel.

02:44 22 In contrast to that was Dr. Sullivan's direct approach  
02:44 23 where he has directly analyzed the -- the usage of the patents  
02:44 24 in real-world Intel products. He's directly determined the  
02:44 25 value of those -- of those patents in their products, as

02:44 1 required by the statute.

02:44 2 You know, so Dr. Sullivan has directly looked at the use  
02:44 3 of the patented technology in Intel products. He's determined  
02:44 4 the benefits of that patented technology as provided -- as  
02:44 5 provided to the products. And he's determined the profits and  
02:44 6 sales that Intel has earned from those products.

02:44 7 And Dr. Sullivan's, you know, indirect approach cannot  
02:44 8 reference the value of the VLSI patents as being used by Intel.  
02:44 9 Dr. Sullivan has conducted that exact analysis.

02:45 10 Q. So did you mean Dr. Huston's -- Mr. Huston's indirect  
02:45 11 approach?

02:45 12 A. I'm sorry. Mr. Huston's indirect approach cannot  
02:45 13 properly refer to the value of VLSI. Thank you.

02:45 14 MS. WEN: Thank you, Mr. Chandler.

02:45 15 I pass the witness.

02:45 16 THE COURT: Mr. Mueller?

02:45 17 MR. MUELLER: Yes, sir.

02:45 18 CROSS-EXAMINATION

02:45 19 BY MR. MUELLER:

02:45 20 Q. Good afternoon, sir. My name is Joe Mueller. May I  
02:45 21 ask you a few questions?

02:45 22 A. Yes.

02:45 23 Q. Now, sir, you referred a few times in your testimony  
02:45 24 just now to what you called Intel's use of the patents. Do you  
02:45 25 recall that, sir?

02:45 1 A. Yes. I do.

02:45 2 Q. Now, you have a degree in electrical engineering,  
02:45 3 correct?

02:45 4 A. Yes. I do.

02:45 5 Q. And I think you showed the jury that you had some  
02:46 6 experience at a John Hopkins laboratory. There was some work  
02:46 7 you did on applied physics; is that right?

02:46 8 A. Johns Hopkins University. Yes.

02:46 9 Q. Johns Hopkins. I apologize. But you did some --

02:46 10 A. Happens all the time. Yes, I did. I've worked in  
02:46 11 atomic clocks.

02:46 12 Q. You have some technical training, fair to say?

02:46 13 A. Yes. That is true.

02:46 14 Q. And, sir, you've offered no opinion whatsoever that  
02:46 15 Intel actually infringes the two patents in this case, correct?

02:46 16 A. That's correct. That was not my assignment.

02:46 17 Q. And so when you say use of the patents, let's be  
02:46 18 clear. You don't have an opinion yourself on whether they're  
02:46 19 actually using the patents, correct?

02:46 20 A. I've relied upon others' opinions. Yes.

02:46 21 Q. Now, you've referred a lot to Intel's use of the  
02:46 22 patents. I noticed you didn't say much about the owner's use  
02:46 23 of the patents, did you?

02:46 24 A. No. I did not.

02:46 25 Q. Because, in fact, they haven't used them, correct?

02:46 1 A. I have no way of knowing one way or the other.

02:46 2 Q. You have no opinion on that issue either, right?

02:46 3 A. I -- I have no way of knowing.

02:46 4 Q. You characterized the patents just now as the  
02:46 5 equivalent of an oil well underneath the motel, right?

02:47 6 A. I made that comparison, yes.

02:47 7 Q. In that analogy, the evidence in this case has shown  
02:47 8 the owners have never tapped into that well themselves. They  
02:47 9 have oil and have chosen not to use it, according to your  
02:47 10 analogy, correct?

02:47 11 A. Perhaps.

02:47 12 Q. Now, you've been retained by VLSI, right?

02:47 13 A. I've been retained by counsel for VLSI.

02:47 14 Q. Paid hundreds of thousands of dollars, correct?

02:47 15 A. Low hundreds. Yes.

02:47 16 Q. Low hundred -- low hundreds, but hundreds of  
02:47 17 thousands of dollars, right?

02:47 18 A. Yes. That's correct. My firm has been paid. Let's  
02:47 19 make that clear.

02:47 20 Q. You've worked with these lawyers in ten other cases,  
02:47 21 haven't you?

02:47 22 A. Ten or less, perhaps.

02:47 23 Q. Now, in this case, you showed the ladies and  
02:47 24 gentlemen of the jury several agreements that Intel entered  
02:47 25 into.

02:47 1 MR. MUELLER: And, Your Honor, if I could briefly go in  
02:47 2 the sealed record?

02:47 3 THE COURT: Yes, sir.

02:47 4 (Sealed proceedings.)

02:47 5 MR. MUELLER: We can take this off, Your Honor, and go off  
02:49 6 the sealed record.

02:49 7 THE COURT: Okay.

02:49 8 BY MR. MUELLER:

02:49 9 Q. Now, Mr. Chandler, you have reviewed for your work on  
02:49 10 this case over 350 agreements, correct?

02:49 11 A. Yes. That is correct.

02:49 12 Q. And those include the agreements we just saw and  
02:49 13 several hundred other agreements that Intel entered into over a  
02:49 14 very long period of time, right?

02:49 15 A. Yeah. That is correct. Yes.

02:49 16 Q. The vast majority of which had nothing to do with  
02:49 17 litigation. They were voluntary license agreements, right?

02:49 18 A. I don't know if it's the vast majority or not.

02:49 19 Q. Okay. Now, you know, because you're a licensing  
02:49 20 expert that in this hypothetical negotiation, it's not a  
02:49 21 hypothetical negotiation to resolve a litigation. It's a  
02:49 22 hypothetical negotiation for a license, right?

02:49 23 A. Yes.

02:49 24 Q. And you understand, because you've done cases like  
02:49 25 this before, that one thing the jury can consider in analyzing

02:49 1 a hypothetical negotiation is something called comparable  
02:50 2 agreements. You know what that term means, right?

02:50 3 A. I do. If they are comparable, indeed.

02:50 4 Q. And a comparable agreement is a particular agreement  
02:50 5 that an expert has said is technologically and economically  
02:50 6 comparable to what would have been the subject of this  
02:50 7 hypothetical negotiation, right?

02:50 8 A. There are other aspects that need to be considered as  
02:50 9 well. But those are -- those are two of them. Correct.

02:50 10 Q. Now, Mr. Huston took the stand just this morning,  
02:50 11 correct?

02:50 12 A. Yes.

02:50 13 Q. And you're not here to question his credentials, are  
02:50 14 you?

02:50 15 A. I'm not -- I -- I'm not sure if I can answer that yes  
02:50 16 or no.

02:50 17 Q. Sure. Let me put it another way. You understand  
02:50 18 that he's a trained engineer, correct?

02:50 19 A. Yes. I do.

02:50 20 Q. Has a master's degree in engineering, right?

02:50 21 A. Yes.

02:50 22 Q. Had 22 years of experience licensing negotiations at  
02:50 23 IBM, correct?

02:50 24 A. That's what I understand, yes.

02:50 25 Q. He negotiated hundreds of agreements as a lead

02:50 1 negotiator, right?

02:50 2 A. I believe so. Yes.

02:50 3 Q. So you're not here to say he's unqualified to offer  
02:50 4 the opinions he offered, are you?

02:50 5 A. That's correct.

02:51 6 Q. Now, he went through a lot of agreements himself, and  
02:51 7 he identified 18 comparable license agreements, correct?

02:51 8 That's what he said are comparable?

02:51 9 A. That's correct.

02:51 10 Q. He also identified some prior sales agreements for  
02:51 11 the patents-in-suit, right?

02:51 12 A. Prior -- I'm not sure if that was multiple. There  
02:51 13 were prior transactions for companies.

02:51 14 Q. There were three, correct? Three transactions that  
02:51 15 cover the patents-in-suit, among other things?

02:51 16 A. Cover -- but you said they were trans- -- I'm sorry.  
02:51 17 You asked me were they transactions for the patents-in-suit?

02:51 18 Q. They were part of deals?

02:51 19 A. There's a distinction there. They -- the first two  
02:51 20 were not -- the company acquisitions were clearly not  
02:51 21 transactions for --

02:51 22 Q. Excuse me.

02:51 23 A. I'm -- I'm just clarifying. Sorry.

02:51 24 Q. You can finish your answer.

02:51 25 A. You asked me if they were for transactions in suit.

02:51 1 I said basically no.

02:51 2 Q. There were three transactions that included the  
02:51 3 patents-in-suit, among other things too, correct?

02:51 4 A. That would be a correct statement.

02:52 5 Q. Now, Mr. Huston identified from this big body of  
02:52 6 evidence things that he thought were comparable, correct?

02:52 7 A. Yes.

02:52 8 Q. You looked at 350 agreements, including the  
02:52 9 agreements you showed the jury and many others, right?

02:52 10 A. That's correct.

02:52 11 Q. And, sir, out of all of those, you didn't identify a  
02:52 12 single agreement that you viewed as comparable, did you?

02:52 13 A. No. I did not.

02:52 14 Q. And, in fact, those settlement agreements you just  
02:52 15 showed the jury, you didn't even find those to be comparable,  
02:52 16 did you?

02:52 17 A. Informative but not comparable. Correct.

02:52 18 Q. Sir, informative but not comparable, correct?

02:52 19 A. Correct.

02:52 20 Q. Now, Mr. Huston went further. He actually provided  
02:52 21 the jury with a number that he said would have been the result  
02:52 22 of this hypothetical negotiation, correct?

02:52 23 A. That is correct.

02:52 24 Q. You yourself, sir, in other cases, have performed  
02:52 25 that same function. You've analyzed a hypothetical negotiation

02:53 1 and come up with a number that you thought would have been the  
02:53 2 result, right?

02:53 3 A. In other cases, yes, that has been my role. Not in  
02:53 4 this case.

02:53 5 Q. In this case you've been paid hundreds of thousands  
02:53 6 of dollars, but you didn't come up with a number, did you?

02:53 7 A. That was not my assignment.

02:53 8 Q. Sir, whether it was your assignment or not, you did  
02:53 9 not come up with a number, did you?

02:53 10 A. That is correct. Dr. Sullivan did.

02:53 11 Q. Now, you have watched the trial testimony in this  
02:53 12 case; is that fair?

02:53 13 A. Much of it. Yes.

02:53 14 Q. And you know the one and only one witness who's taken  
02:53 15 the stand and said that Intel is actually using these patents  
02:53 16 is Dr. Conte who testified this morning, right?

02:53 17 A. That is correct.

02:53 18 Q. And as you saw this morning, he disagrees with  
02:53 19 Intel's engineers on certain technical issues, right?

02:53 20 A. I didn't see all his testimony this morning.

02:53 21 Q. Let's put it this way. If the ladies and gentlemen  
02:53 22 of the jury decide that Intel's engineers are right, Dr. Conte  
02:53 23 is wrong and there's no infringement, what would be the  
02:53 24 appropriate reasonable royalty?

02:54 25 A. Under those conditions, it would be zero.

02:54 1 Q. Thank you, sir.

02:54 2 MR. MUELLER: I have no further questions.

02:54 3 THE COURT: Redirect?

02:54 4 REDIRECT EXAMINATION

02:54 5 BY MS. WEN:

02:54 6 Q. Just a few questions.

02:54 7 A. Uh-huh.

02:54 8 Q. Mr. Chandler, do you recall when Intel's counsel  
02:54 9 asked you about the prior work you've done with my firm?

02:54 10 A. Yes. I do.

02:54 11 Q. When you provide expert testimony, are you trying to  
02:54 12 provide testimony to help the party you're working with or  
02:54 13 provide your neutral opinions?

02:54 14 A. When I'm hired, I'm asked to conduct an analysis to  
02:54 15 take in the facts, to discern that and form my own independent  
02:54 16 opinions. And I've done this work for plaintiffs and  
02:55 17 defendants.

02:55 18 Q. And does it matter what law firm you're working with?

02:55 19 A. No. It doesn't matter at all.

02:55 20 Q. And recall when you were asked about the settlement  
02:55 21 agreements that you talked to the jury about?

02:55 22 A. Yes. I do.

02:55 23 Q. Why did you talk about the settlement agreements?

02:55 24 A. Well, as I mentioned, in my view, the parties to the  
02:55 25 hypothetical negotiation would have found those agreements to

02:55 1 be informative, informative of licensing behavior, past history  
02:55 2 of one of the two parties that's at the table at the  
02:55 3 negotiation.

02:55 4 And as I mentioned, these were seven agreements when cases  
02:55 5 have proceeded into litigation, where they've settled for  
02:55 6 hundreds of millions, if not billions of dollars.

02:55 7 MS. WEN: And can we go briefly on the confidential record  
02:55 8 to discuss one of the agreements?

02:55 9 THE COURT: Yes.

02:55 10 (Sealed proceedings.)

02:58 11 MS. WEN: Thank you, Mr. Chandler.

02:58 12 MS. WEN: I pass the witness.

02:58 13 THE COURT: Mr. Mueller?

02:58 14 MR. MUELLER: We can go back on the public record, Your  
02:58 15 Honor.

02:58 16 RECROSS-EXAMINATION

02:58 17 BY MR. MUELLER:

02:58 18 Q. Just a couple final questions, Mr. Chandler.

02:58 19 Again, you studied over 300 agreements for your work on  
02:58 20 this case, correct?

02:58 21 A. That is correct.

02:59 22 Q. You concluded that not a single one was comparable,  
02:59 23 right?

02:59 24 A. Yes. As I just mentioned.

02:59 25 Q. You were not able to find a single comparable

02:59 1 agreement to the damages demand that VLSI is making of billions  
02:59 2 for two patents, correct?

02:59 3 A. Not through comparable agreement analysis.

02:59 4 Q. You had no comparable, did you?

02:59 5 A. That is correct.

02:59 6 MR. MUELLER: No further questions.

02:59 7 THE COURT: You may step down.

02:59 8 Does the plaintiff have any other witness?

02:59 9 MR. CHU: VLSI rests its case.

02:59 10 THE COURT: Mr. Lee?

02:59 11 MR. LEE: Two things, Your Honor. One is we would renew  
02:59 12 our motions again as we're obligated to do, and Intel rests.

02:59 13 THE COURT: Ladies and gentlemen, if you'll give me just  
02:59 14 two minutes to step back with my clerk and make sure we're  
02:59 15 ready to go, I think I'll come back in and be able to read you  
03:00 16 the jury charge, which is only 44 pages long.

03:00 17 So I'm going to go back and just make sure we are ready to  
03:00 18 go. I'll come out. I'll read it to you. When I finish  
03:00 19 reading it to you, we'll take a short break and then we'll have  
03:00 20 the closing arguments. If you all just will hold fast for a  
03:00 21 one or two minutes.

03:00 22 THE BAILIFF: All rise.

03:00 23 (Recess taken from 3:00 to 3:01.)

03:02 24 THE COURT: Thank you. You may be seated.

03:02 25 Yes, sir.

03:02 1 MR. CHU: We just wanted to renew our motions.

03:02 2 THE COURT: Okay.

03:02 3 MR. CHU: Thank you.

03:02 4 THE COURT: Thank you, sir. And for the record, they're  
03:02 5 denied.

03:02 6 Okay. Ladies and gentlemen of the jury -- let me ask one  
03:02 7 question of the lawyers. Typically I don't read the verdict  
03:02 8 form. But if either counsel cares for me to do that, I'll do  
03:02 9 that. Just let me know.

03:02 10 MR. CHU: It's fine with us if you do not read the verdict  
03:02 11 form.

03:02 12 MR. LEE: It's fine with us. They'll have a hard copy.

03:02 13 THE COURT: Yes, sir.

03:03 14 Are you all ready?

03:03 15 Very good. Members of the jury, it is my duty and  
03:03 16 responsibility to instruct you on the law you are to apply in  
03:03 17 this case. The law contained in these instructions is the only  
03:03 18 law that you may follow. It is your duty to follow what I  
03:03 19 instruct you the law is regardless of any opinion that you  
03:03 20 might have as to what the law ought to be.

03:03 21 Each of you is going to have your own printed copy of the  
03:03 22 final jury instructions that I'm giving you so there is really  
03:03 23 no need for you to take notes unless you want to.

03:03 24 If I have given you the impression during the trial that I  
03:03 25 favor either party, you must disregard that impression. If I

03:03 1 have given you the impression during the trial that I have an  
03:03 2 opinion about the facts of this case, you must disregard that  
03:03 3 impression.

03:03 4 You are the sole judges of the facts of this case. Other  
03:03 5 than my instructions to you on the law, you should disregard  
03:03 6 anything I may have said or done during the trial in arriving  
03:03 7 at your verdict. You should consider all of the instructions  
03:04 8 about the law as a whole and regard each instruction in light  
03:04 9 of the others without isolating a particular statement or  
03:04 10 paragraph.

03:04 11 The testimony of the witnesses and other exhibits  
03:04 12 introduced by the parties constitutes the evidence. The  
03:04 13 statements of counsel are not evidence. They are only  
03:04 14 arguments.

03:04 15 It is important for you to distinguish between the  
03:04 16 arguments of counsel and the evidence on which those arguments  
03:04 17 rest. What the lawyers say or do is not evidence. You may,  
03:04 18 however, consider their arguments in light of the evidence that  
03:04 19 has been admitted and determine whether the evidence admitted  
03:04 20 in this trial supports the arguments.

03:04 21 You must determine the facts from all of the testimony  
03:04 22 that you have heard and the other evidence submitted. You are  
03:04 23 the judges of the facts, but in finding those facts, you must  
03:04 24 apply this law as I instruct you.

03:04 25 You are required by law to decide this case in a fair,

03:04 1 impartial and unbiased manner based entirely on the law and on  
03:05 2 the evidence presented to you in the courtroom. You may not be  
03:05 3 influenced by passion, prejudice or sympathy that you might  
03:05 4 have for VLSI or Intel in arriving at your verdict.

03:05 5 After the remainder of these instructions, you will hear  
03:05 6 closing arguments from the attorneys. Statements and arguments  
03:05 7 of the attorneys, I remind you, are not evidence. They are not  
03:05 8 instructions on the law. They are intended only to assist the  
03:05 9 jury in understanding the evidence and the parties'  
03:05 10 contentions.

03:05 11 A verdict form has been prepared for you. You are to take  
03:05 12 this verdict form with you to the jury room. And when you have  
03:05 13 reached a unanimous decision or agreement as to the verdict,  
03:05 14 you are to have your foreperson fill in the blanks in the  
03:05 15 verdict form, date it and sign it.

03:05 16 Answer each question in the verdict form from the facts as  
03:05 17 you find them to be. Do not decide who you think should win  
03:05 18 the case and then answer the questions to reach that result.  
03:05 19 Again, your answers and your verdict must be unanimous.

03:05 20 I will now summarize the issues that you must decide and  
03:05 21 for which I will provide instructions to guide your  
03:06 22 deliberations. You must decide the following four main issues:  
03:06 23 Whether VLSI has proven by a preponderance of the evidence that  
03:06 24 any of the following claims are infringed by Intel: Claims 1,  
03:06 25 5, 6, 9 and 11 of the '373 patent by the Haswell client and

03:06 1 Broadwell client products by literal infringement, and  
03:06 2 Claims 14, 17, 18 and 24 of the '759 patent by the Skylake  
03:06 3 client and server, Kaby Lake client, Coffee Lake client,  
03:06 4 Whiskey Lake client, Amber Lake client, Cannon Lake client, Ice  
03:06 5 Lake client and server, Cascade Lake server and Tiger Lake  
03:06 6 client, products that include Speed Shift technology by literal  
03:06 7 infringement or under the Doctrine of Equivalents.

03:06 8 Patent infringement is determined on a claim-by-claim  
03:06 9 basis. You may find that one claim of a patent is infringed  
03:06 10 while other claims of the same patent are not infringed.

03:06 11 No. 2, whether VLSI has proven by a preponderance of the  
03:06 12 evidence that Intel's infringement of any of the claims was  
03:07 13 willful.

03:07 14 3, whether Intel has proven by clear and convincing  
03:07 15 evidence that any of the following claims are invalid:  
03:07 16 Claims 14, 17, 18 and 24 of the '759 patent.

03:07 17 Patent invalidity is determined on a claim-by-claim basis.  
03:07 18 You may find that one claim of a patent is invalid while other  
03:07 19 claims of the same patent are not invalid.

03:07 20 4, if any claims of any patents are infringed and not  
03:07 21 invalid, what amount of damages, if any, VLSI has proven by a  
03:07 22 preponderance of the evidence for infringement of those claims.

03:07 23 3, evidence. The evidence you are to consider consists of  
03:07 24 the testimony of the witnesses, the documents and exhibits that  
03:07 25 I admitted into evidence and any facts the lawyers agreed or

03:07 1 stipulated to. You are to apply any fair inferences and  
03:07 2 reasonable conclusions you draw from the facts and  
03:07 3 circumstances that you believe have been proven. Nothing else  
03:07 4 is evidence.

03:07 5 As a reminder, here are some evidence of what is not  
03:08 6 evidence: The fact that VLSI filed a lawsuit is not evidence  
03:08 7 that is entitled to a judgment. The act of making a claim in a  
03:08 8 lawsuit by itself does not in any way tend to establish that  
03:08 9 claim -- that claim and is not in evidence -- and is not  
03:08 10 evidence.

03:08 11 Likewise, the fact that Intel has raised arguments against  
03:08 12 the claim or claims asserted is not evidence that Intel is  
03:08 13 entitled to a judgment. The act of making defensive arguments  
03:08 14 by itself does not in any way tend to establish that such  
03:08 15 arguments have merit and is not evidence.

03:08 16 The statements, arguments and questions by the attorneys  
03:08 17 are not evidence. Objections to questions are not evidence.  
03:08 18 The attorneys that are seated in front of you may object if  
03:08 19 they believe that documents or testimony that is attempted to  
03:08 20 be offered into evidence are improper under the rules of  
03:08 21 evidence.

03:08 22 During the trial I may not have let you hear the answers  
03:08 23 to some of the questions the lawyers asked. I may have ruled  
03:08 24 that you cannot see some of the exhibits that the lawyers  
03:08 25 wanted you to see. Further, sometimes I may have ordered you

03:08 1 to disregard things that you saw or heard, or struck things  
03:09 2 from the record.

03:09 3 You must follow my rulings and completely ignore all of  
03:09 4 these things. Do not speculate about what a witness might have  
03:09 5 said or what an exhibit might have shown. These things are not  
03:09 6 evidence and you are bound by your oath not to let them  
03:09 7 influence your decision in any way.

03:09 8 Generally speaking, there are two types of evidence. One  
03:09 9 is direct evidence, such as testimony of eye witnesses.

03:09 10 The other is indirect or circumstantial evidence.

03:09 11 Circumstantial evidence is evidence that proves a fact from  
03:09 12 which you can logically conclude another fact exists.

03:09 13 As a general rule, the law makes no distinction between  
03:09 14 direct and circumstantial evidence. It simply requires that  
03:09 15 you determine the facts from all of the evidence that you hear  
03:09 16 in this case, whether direct, circumstantial or any  
03:09 17 combination.

03:09 18 As I instructed you before the trial began, in judging the  
03:09 19 facts you must consider all the evidence, both direct and  
03:09 20 circumstantial. That does not mean you have to believe all of  
03:09 21 the evidence. It is entirely up to you to give the evidence  
03:09 22 you receive in this case whatever weight you individually  
03:09 23 believe it deserves. It'll be up to you to decide which  
03:09 24 witnesses to believe, which witnesses not to believe, the  
03:10 25 weight you give any testimony you hear and how much of any

03:10 1 witness' testimony you choose to accept or reject.

03:10 2 You should never be influenced by any ruling on any  
03:10 3 objection. If I sustained an objection, then just pretend the  
03:10 4 question was never asked. If there was an answer given, ignore  
03:10 5 it. If I overruled the objection, act like the objection was  
03:10 6 never made. If I gave you an instruction that some item of  
03:10 7 evidence was received only for a limited purpose, you must  
03:10 8 follow that instruction.

03:10 9 If I gave any limiting instruction during the trial, you  
03:10 10 must follow it. Any testimony I tell you to exclude or  
03:10 11 disregard is not evidence and it may not be considered.

03:10 12 You must not conduct any independent research or  
03:10 13 investigation. You must make your decision based only on the  
03:10 14 evidence I have defined here and nothing else.

03:10 15 Some evidence was admitted for a limited purpose only.  
03:10 16 When I instruct you that an item of evidence has been admitted  
03:10 17 for a limited purpose, you must consider it only for that  
03:10 18 limited purpose.

03:11 19 You have heard certain arguments and evidence regarding  
03:11 20 Intel's patents. The fact that Intel has patents does not mean  
03:11 21 that it has a right to use VLSI's patented technology and has  
03:11 22 no impact on whether Intel has or has not infringed the  
03:11 23 asserted patents.

03:11 24 Certain charts and summaries have been shown to you to  
03:11 25 help -- solely to help you explain or summarize the facts

03:11 1 disclosed by the books, records and other documents that are in  
03:11 2 evidence. These charts and summaries are not evidence or proof  
03:11 3 of any facts unless I specifically admitted a chart or summary  
03:11 4 into evidence.

03:11 5 You should determine the facts from the evidence. Certain  
03:11 6 exhibits shown to you, such as PowerPoint presentations,  
03:11 7 posters or models or illustrations of the evidence but are not  
03:11 8 themselves evidence. It is a party's description, picture or  
03:11 9 model used to describe something involved in the trial.

03:11 10 It is your recollection of the evidence. If your  
03:11 11 recollection of the evidence differs from the exhibits, rely on  
03:12 12 your recollection.

03:12 13 Witnesses. You alone determine the credibility, questions  
03:12 14 of credibility or truthfulness of the witnesses. In weighing  
03:12 15 the testimony of witnesses, you may consider the witness'  
03:12 16 manner and demeanor on the witness stand, any feelings or  
03:12 17 interest in the case, any prejudice or bias about the case and  
03:12 18 the consistency or inconsistency of the witness' testimony  
03:12 19 considered in the light of circumstances.

03:12 20 Has the witness been contradicted by other credible  
03:12 21 evidence? Has the witness made statements at other times that  
03:12 22 are contrary to those made here on the witness stand?

03:12 23 You must give the testimony of each witness the  
03:12 24 credibility you think it deserves. Even though a witness may  
03:12 25 be a party to the action, and, therefore, interested in the

03:12 1 outcome, you may accept the testimony if it is not contradicted  
03:12 2 by direct evidence or by any inference that may be drawn from  
03:12 3 the evidence, if you believe the testimony.

03:12 4 You are not to decide the case by counting the number of  
03:12 5 witnesses who have testified for the different sides.

03:13 6 Witness testimony is weighed. Witnesses are not counted.  
03:13 7 The test is not the relative number of witnesses but the  
03:13 8 relative convincing force of the evidence.

03:13 9 The testimony of a single witness is sufficient to prove  
03:13 10 any fact, even if a greater number of witnesses testify to the  
03:13 11 contrary, if -- after you've considered all the evidence --  
03:13 12 other evidence, you choose to believe a single witness.

03:13 13 Deposition testimony. Certain testimony has been  
03:13 14 presented to you through a deposition. A deposition is the  
03:13 15 sworn, recorded answers to a question a witness was asked in  
03:13 16 advance of the trial. Under some circumstances, if a witness  
03:13 17 cannot be present to testify from the witness stand, that  
03:13 18 witness' testimony may be presented under oath in the form of a  
03:13 19 deposition.

03:13 20 Sometime before the trial, attorneys representing the  
03:13 21 party in this case questioned this witness under oath. A court  
03:13 22 reporter was present and recorded the testimony. The questions  
03:13 23 and answers may be shown to you. The deposition testimony is  
03:13 24 entitled to the same considerations and is to be weighed and  
03:14 25 otherwise considered by you in the same way as if the witness

03:14 1 had been present and had testified from the witness stand in  
03:14 2 court.

03:14 3 In addition, some of the video recordings of witnesses you  
03:14 4 see may be of lower quality because the witness had their  
03:14 5 deposition taken from home. This was due to COVID-19  
03:14 6 restrictions in place at the time and in the location where the  
03:14 7 witness was located. You should not hold the quality or lack  
03:14 8 of quality of the video, the location of the witness or any  
03:14 9 other circumstances arising from COVID-19 restrictions against  
03:14 10 either party.

03:14 11 Expert testimony is testimony from a person who has a  
03:14 12 special skill or knowledge in some science, profession or  
03:14 13 business. This skill and knowledge is not common to the  
03:14 14 average person but has been acquired by the expert through  
03:14 15 special study or experience.

03:14 16 In weighing expert testimony, you may consider the  
03:14 17 expert's qualifications, the reasons for the expert's opinions  
03:14 18 and the reliability of the information supporting the expert's  
03:14 19 opinions as well as the factors that I previously mentioned for  
03:15 20 weighing testimony of any other witness.

03:15 21 Expert testimony should receive whatever weight and credit  
03:15 22 you think appropriate, given all the other evidence in the  
03:15 23 case. You're not required to accept the opinion of any expert,  
03:15 24 rather, you are free to accept or reject the testimony of  
03:15 25 experts just as with any other witness.

03:15 1 A stipulation is an agreement. When there is no dispute  
03:15 2 about certain facts, the parties may agree to stipulate to the  
03:15 3 facts. You must accept a stipulated fact as evidence and treat  
03:15 4 that fact as having been proven in court.

03:15 5 Do not let bias, prejudice or sympathy play any part in  
03:15 6 your deliberations. Whether you're familiar with one party or  
03:15 7 the other should not play any part in your deliberations.

03:15 8 A corporation and all other persons are equal before the  
03:15 9 law and must be treated as equals in a court of justice. In  
03:15 10 any legal action, facts must be proved by a requirement of  
03:15 11 evidence known as the burden of proof.

03:16 12 The burden of proof in this case is on VLSI for some  
03:16 13 issues and on Intel for others.

03:16 14 There are two burdens of proof that you apply in this  
03:16 15 case. One is the preponderance of the evidence, and the other  
03:16 16 is clear and convincing evidence.

03:16 17 The burden of proof applicable to VLSI in this case is  
03:16 18 known as the preponderance of evidence. VLSI has the burden of  
03:16 19 proving patent infringement by a preponderance of the evidence.

03:16 20 VLSI further has the burden of proving willful patent  
03:16 21 infringement by a preponderance of the evidence. VLSI further  
03:16 22 has the burden of proving damages for any alleged patent  
03:16 23 infringement by a preponderance of the evidence.

03:16 24 A preponderance of the evidence means to prove something  
03:16 25 is more likely so than not so, i.e., evidence that persuades

03:16 1 you that a claim is more probably true than not true.

03:16 2 Sometimes this is talked about as being the greater weight and

03:16 3 degree of credible testimony.

03:16 4 You may think of this preponderance of the evidence

03:16 5 standard as slightly greater than 50 percent.

03:16 6 Intel does not have any burden of proof on the issues of

03:17 7 patent infringement and damages.

03:17 8 Intel has the burden of proving patent invalidity by clear

03:17 9 and convincing evidence.

03:17 10 Clear and convincing evidence means evidence that produces

03:17 11 in your mind a firm belief or conviction as to the truth of the

03:17 12 matters sought to be established. It is evidence so clear,

03:17 13 direct, weighty and convincing as to enable you to come to a

03:17 14 clear conviction without hesitancy.

03:17 15 The standard is different from the preponderance of the

03:17 16 evidence standard which applies to VLSI's burden of proving

03:17 17 infringement or damages.

03:17 18 These standards are different from what you may have

03:17 19 learned about in criminal proceedings where a fact is proven

03:17 20 beyond a reasonable doubt. On a scale of the various standards

03:17 21 of proof, as you move from the preponderance of the evidence

03:17 22 where the proof need only be sufficient to tip the scales in

03:17 23 favor of the party proving the fact to the other end beyond a

03:17 24 reasonable doubt, where the fact must be proven by a very high

03:17 25 degree of certainty. You may think of clear and convincing

03:18 1 evidence as being between those two standards.

03:18 2 VLSI does not have any burden of proof on the issue of  
03:18 3 patent validity or prior art.

03:18 4 As I did at the start of the case, I will now give you a  
03:18 5 summary of each side's contentions in the case.

03:18 6 I will then provide you with detailed instructions on what  
03:18 7 each side must prove to prevail on each contentions.

03:18 8 VLSI is the owner of two patents in this case. They are  
03:18 9 United States Patent No. 7,523,373, the '373 patent, and United  
03:18 10 States Patent No. 7,725,759 or the '759 patent.

03:18 11 These patents collectively have been referred to as the  
03:18 12 VLSI patents or the asserted patents.

03:18 13 VLSI contends that Intel infringes Claims 1, 5, 6, 9 and  
03:18 14 11 of the '373 patent by literal infringement and Claims 14,  
03:18 15 17, 18 and 24 of the '759 patent by literal infringement and  
03:19 16 under the Doctrine of Equivalents. The claims may be referred  
03:19 17 to as the VLSI patent claims or a certain asserted claims.

03:19 18 VLSI contends that Intel directly infringes the asserted  
03:19 19 claims by importing, making, using, offering to sell or selling  
03:19 20 certain microprocessor products.

03:19 21 The names of these Intel products by code names and by  
03:19 22 patents are Haswell client and Broadwell client products for  
03:19 23 the '373 patent and Skylake client server, Kaby Lake client,  
03:19 24 Coffee Lake client, Whiskey Lake client, Amber Lake client,  
03:19 25 Cannon Lake client, Ice Lake client and server, Cascade Lake

03:19 1 server and Tiger Lake client products, including Speed Shift  
03:19 2 technology for the '759 patent.

03:19 3 There are two ways in which a patent claim can be  
03:19 4 infringed. First, a claim can be literally infringed.

03:19 5 Second, a claim can be infringed under what's called the  
03:19 6 Doctrine of Equivalents.

03:19 7 To determine infringement, you must compare the accused  
03:19 8 products with each claim that is asserted in the VLSI patents  
03:20 9 that VLSI asserts is infringed.

03:20 10 Additionally, VLSI alleges that Intel willfully infringed  
03:20 11 each of the '373 patent and '759 patents.

03:20 12 VLSI further contends that it is entitled to recover  
03:20 13 damages for Intel's infringement.

03:20 14 Intel denies that it infringes any asserted claims of the  
03:20 15 asserted patents. Noninfringement is a defense to a charge of  
03:20 16 infringement. Intel also contends it has not willfully  
03:20 17 infringed any asserted claim of the asserted patents.

03:20 18 In addition, Intel contends that the asserted claims of  
03:20 19 the '759 patent, but not the '373 patent, are invalid.  
03:20 20 Invalidity is a defense to infringement.

03:20 21 Intel contends that VLSI is not entitled to damages.

03:20 22 Although the Court and parties may have referred to the  
03:20 23 claims collectively, you must conduct your invalidity analysis  
03:20 24 as to each claim individually.

03:21 25 Before you can decide many of the issues in this case,

03:21 1 you'll need to understand the role of the patent claims.

03:21 2       The claims of a patent are the numbered sentences at the  
03:21 3 end of the patent. The claims define the patent owner's rights  
03:21 4 under the law. The claims are important because it is the  
03:21 5 words of the claims themselves that define what the product  
03:21 6 covers.

03:21 7       The figures and the text in the rest of the patent provide  
03:21 8 a description or examples of the claimed invention. They  
03:21 9 provide a context for the claims, but it is the claims that  
03:21 10 define the breadth of the patent's coverage.

03:21 11       Each claim is effectively treated as if it were its own  
03:21 12 separate patent. And each claim may cover more or may cover  
03:21 13 less than any other claim, therefore, what a patent covers  
03:21 14 collectively or as a whole depends on what each of its claims  
03:21 15 cover.

03:21 16       You will first need to understand what each claim covers  
03:21 17 in order to decide whether or not there's infringement of that  
03:22 18 claim and decide whether or not the claim is invalid. You are  
03:22 19 to use the plain and ordinary meaning of the words of the  
03:22 20 patent claims as understood by a person of ordinary skill in  
03:22 21 the art, which is to say in the field of technology of the  
03:22 22 patent at the time of the alleged invention.

03:22 23       The meanings of the words of the patent claims must be the  
03:22 24 same when deciding both the issues of invalidity and  
03:22 25 infringement.

03:22 1 I'll now explain how a claim defines what it covers. A  
03:22 2 claim sets forth, in words, a set of requirements. Each claim  
03:22 3 sets forth its requirements in a single sentence.

03:22 4 If it is a device or method that satisfies each of the  
03:22 5 requirements in that sentence, then it is covered by "infringes  
03:22 6 the claim."

03:22 7 There can be several claims in a patent. A claim may be  
03:22 8 narrower or broader than another claim by setting forth more or  
03:22 9 fewer requirements. The coverage of a patent is assessed in a  
03:22 10 claim-by-claim basis.

03:23 11 In patent law, the requirements of a claim are often  
03:23 12 referred to as claim elements or claim limitations. When a  
03:23 13 product or method meets all of the requirements of a claim,  
03:23 14 where it meets all of its limitations or all of its elements,  
03:23 15 the claim is said to cover that product or method and that  
03:23 16 product or method is said to fall within the scope of that  
03:23 17 claim.

03:23 18 In other words, a claim covers a product or method where  
03:23 19 each of the claimed elements or limitations is present in that  
03:23 20 product or method.

03:23 21 If a product or method is missing even one limitation or  
03:23 22 element of the claim, the product or method is not covered by  
03:23 23 that claim.

03:23 24 If the product or method is not covered by the claim, the  
03:23 25 product or method does not infringe the claim.

03:23 1       The case involves two types of patent claims: Independent  
03:23 2 claims and dependent claims.

03:23 3       An independent claim sets forth all of the requirements  
03:24 4 that must be met in order to be covered by that claim. Thus,  
03:24 5 it is not necessary to look at any other claim to determine  
03:24 6 what an independent claim covers.

03:24 7       In this case the following claims are independent claims:  
03:24 8 Claims 1 and 9 of the '373 patent and Claims 14 and 18 of the  
03:24 9 '759 patent. The remainder of the asserted claims of the VLSI  
03:24 10 patents are dependent claims. A dependent claim does not  
03:24 11 itself recite all of the requirements of the claim. It refers  
03:24 12 to another claim for some of its requirements.

03:24 13       In this way the claim depends on another claim. A  
03:24 14 dependent claim incorporates all of the requirements of the  
03:24 15 claims to which it refers.

03:24 16       The dependent claim then adds its own additional  
03:24 17 requirements. To determine what a dependent claim covers, it  
03:24 18 is necessary to look at both the dependent claim and any other  
03:24 19 claims to which it refers.

03:24 20       A product or process that meets all of the requirements of  
03:25 21 both the dependent claim and the claims to which it refers is  
03:25 22 covered by the dependent claim. If any requirement of the  
03:25 23 dependent claim is not met, or if any requirement of the  
03:25 24 independent claim from which the dependent claim depends is not  
03:25 25 met, then the product or process does not infringe that

03:25 1 dependent claim.

03:25 2 On the other hand, if the requirement of an independent  
03:25 3 claim are all met but a requirement of a dependent claim is not  
03:25 4 met, the independent claim is still infringed.

03:25 5 In this case the following claims are dependent claims:  
03:25 6 5, 6 and 11 in the '373 patent and 17 and 24 of the '759  
03:25 7 patent.

03:25 8 Comprising claims. The preamble to each of the asserted  
03:25 9 claims of the VLSI patents uses the word "comprising."

03:25 10 For example, in the phrases, "a method comprising" or "a  
03:25 11 system comprising," the word "comprising" means "including the  
03:26 12 following" but "not excluding others."

03:26 13 A claim that includes the word "comprising" is not limited  
03:26 14 to products or methods having only the elements recited in the  
03:26 15 claims but also cover products or methods to add additional  
03:26 16 elements.

03:26 17 For example, a claim to a table comprising a tabletop,  
03:26 18 legs and glue would be infringed by a table that includes a  
03:26 19 tabletop, legs and glue, even if the table also includes wheels  
03:26 20 on the table's legs.

03:26 21 If you find that Intel's products or methods include all  
03:26 22 of the elements to a claim, literally or under the Doctrine of  
03:26 23 Equivalents where applicable, even if Intel's products or  
03:26 24 methods include additional components or steps, you must find  
03:26 25 that Intel's products or methods infringe the claims.

03:26 1 I like Page 23. Every page should be as long as Page 23.  
03:26 2 The use of the terms "a" or "an" in a claim is a term of  
03:27 3 art, which has a special meaning in the context of a patent  
03:27 4 claim. When used in a claim, the term "a" or "an" means one or  
03:27 5 more.

03:27 6 I will now instruct you as to the rules you must follow  
03:27 7 when deciding whether or not VLSI has proven that Intel  
03:27 8 infringed any of the claims of the '373 and '759 patents.

03:27 9 Patent law gives the owner of a valid patent the right to  
03:27 10 exclude others from importing, making, using, offering to sell  
03:27 11 or selling within the United States a product claimed in the  
03:27 12 patent or performing within the United States a method claim to  
03:27 13 the patent. During the term of the patent, any person or  
03:27 14 business entity that is engaged in any of those acts without  
03:27 15 the patent owner's permission infringes the patent.

03:27 16 Here VLSI alleges that Intel infringes the following  
03:27 17 claims through its accused products: Claims 1, 5, 6, 9 and 11  
03:27 18 of the '373 patent and Claims 14, 17, 18 and 24 of the '759  
03:28 19 patent.

03:28 20 And in determining infringement, you must compare Intel's  
03:28 21 accused products and methods to the claims of the '373 and '759  
03:28 22 patents when making your decisions regarding infringement.

03:28 23 As explained further in the following instructions,  
03:28 24 infringement results if the defendant makes, uses, sells or  
03:28 25 offers to sell a product or method that infringes a claim,

03:28 1 either literally or under the Doctrine of Equivalents.

03:28 2 In this case VLSI asserts that Intel has directly  
03:28 3 infringed each of the VLSI patents. Intel is liable for  
03:28 4 directly infringing each asserted claim of the VLSI patents.  
03:28 5 If you find that VLSI has proven that it is more likely than  
03:28 6 not that Intel made, used, imported or offered to sell or sold  
03:28 7 the invention defined in at least one claim of the patent in  
03:28 8 the United States, a device recited in the claim or performed  
03:28 9 in the United States, a method recited in at least one claim.

03:28 10 A party can directly infringe a patent without knowing of  
03:28 11 the patent or without knowing that what the party is doing is  
03:29 12 patent infringement.

03:29 13 Even if the party individually -- independently creates  
03:29 14 the accused product or method, it can still infringe.

03:29 15 Literal infringement. There are two types of  
03:29 16 infringement: Literal and infringement under the Doctrine of  
03:29 17 Equivalents.

03:29 18 I'll now instruct you on literal infringement and then  
03:29 19 will provide instruction on infringement under the Doctrine of  
03:29 20 Equivalents.

03:29 21 In order to prove literal infringement of a patent claim,  
03:29 22 VLSI must prove by a preponderance of the evidence that it is  
03:29 23 more likely than not that Intel made, used, sold, offered for  
03:29 24 sale within or imported in the United States a product or  
03:29 25 process that meets all of the requirements of a claim and did

03:29 1 so without VLSI's permission.

03:29 2 You must compare the product or process with each and  
03:29 3 every one of the requirements of a claim to determine whether  
03:29 4 or not all the requirements of that claim are met.

03:29 5 A claim element is literally present if it exists in the  
03:29 6 accused product or is performed by the accused method as it is  
03:29 7 described in the claim language.

03:30 8 You must determine separately for each asserted claim  
03:30 9 whether or not there is infringement for dependent claims. If  
03:30 10 you find that a claim to which a dependent claim refers is not  
03:30 11 infringed, there cannot be infringement of that independent  
03:30 12 claim.

03:30 13 On the other hand, if you find that an independent claim  
03:30 14 has been infringed, you must still decide separately whether  
03:30 15 the product or method meets the additional requirements of any  
03:30 16 claims that depend from the independent claim to determine  
03:30 17 whether those dependent claims have also been infringed. This  
03:30 18 is because the dependent claim includes all the requirements of  
03:30 19 any of the claims to which it refers, plus additional  
03:30 20 requirements of its own.

03:30 21 Doctrine of Equivalents. If a company makes, sells, uses,  
03:30 22 offers to sell within or imports into the United States a  
03:30 23 product or process that does not literally meet all the  
03:30 24 limitations of a claim and then does not literally infringe  
03:30 25 that claim, there can still be direct infringement if that

03:30 1 product or process satisfies the claim limitation under the  
03:31 2 Doctrine of Equivalents.

03:31 3 Under the Doctrine of Equivalents, a product or process  
03:31 4 infringes a claim if the accused product or process contains  
03:31 5 elements or performs steps that literally meet or are  
03:31 6 equivalent to each and every limitation of the claim.

03:31 7 You may find the limitation or step is equivalent to an  
03:31 8 element of a claim that is not met literally if a person having  
03:31 9 ordinary skill in the field of technology of the patent would  
03:31 10 have considered the differences between them to be  
03:31 11 insubstantial.

03:31 12 You may find that an element or step is equivalent to an  
03:31 13 element of a claim that is not met literally if the element or  
03:31 14 step, one, performs substantially the same function; and, two,  
03:31 15 works in substantially the same way. And -- I'm sorry. No  
03:31 16 "and." Three, to achieve substantially the same result as the  
03:31 17 limitation of the claims.

03:31 18 In order to prove infringement by equivalents, VLSI must  
03:31 19 prove the equivalency of the element or steps to the claim  
03:31 20 limitation. Thus, each element of a claim must be met by the  
03:31 21 accused product or process, either literally or under the  
03:32 22 Doctrine of Equivalents, for you to find infringement. VLSI  
03:32 23 must prove infringement by a preponderance of the evidence.

03:32 24 Known interchangeability of the claim limitation and the  
03:32 25 proposed equivalent of a factor that can support a finding of

03:32 1 infringement under the Doctrine of Equivalents. In order for  
03:32 2 the element or step to be considered interchangeable, the claim  
03:32 3 element must have been known at the time of the alleged  
03:32 4 infringement to a person having ordinary skill in the field of  
03:32 5 technology of the patent. Interchangeability at the present  
03:32 6 time is not sufficient.

03:32 7 VLSI contends that if you find Intel does not infringe the  
03:32 8 asserted claims of the '759 patent literally, then they do so  
03:32 9 and infringe the asserted claims of the '759 patent under the  
03:32 10 Doctrine of Equivalents.

03:32 11 In this case VLSI argues that Intel willfully infringed  
03:32 12 the asserted patents. If you have decided that Intel has  
03:33 13 infringed any claims of the VLSI patents, you must go on and  
03:33 14 address the additional issue of whether or not the infringement  
03:33 15 was willful.

03:33 16 Willfulness requires you to determine whether VLSI proved  
03:33 17 that it is more likely than not that the infringement by Intel  
03:33 18 was willful. You may not determine that it was willful just  
03:33 19 because you find that Intel was aware of the VLSI patents and  
03:33 20 infringed them. Instead, you must also find that Intel  
03:33 21 deliberately infringed the VLSI patents.

03:33 22 To determine whether Intel acted willfully, consider all  
03:33 23 facts and assess Intel's knowledge at the time of the  
03:33 24 challenged conduct.

03:33 25 Facts that may be considered include, but are not limited

03:33 1 to, one, whether or not Intel acted consistently with the  
03:33 2 standards of behavior for the industry; two, whether or not  
03:33 3 Intel intentionally copied a product of VLSI or a prior patent  
03:33 4 owner that is covered by the VLSI patents; three, whether or  
03:33 5 not Intel reasonably believed it did not infringe or that the  
03:33 6 patent was invalid; four, whether or not Intel made a good  
03:34 7 faith effort to avoid infringing the VLSI patents. For  
03:34 8 example, whether Intel attempted to design around the VLSI  
03:34 9 patents; and, five, whether or not Intel tried to cover up its  
03:34 10 infringement.

03:34 11 An infringer may be found liable for willful infringement  
03:34 12 even if it did not have actual knowledge of the patent or  
03:34 13 infringement if the infringer intentionally took steps to  
03:34 14 remain unaware of the patent or infringement. This is known as  
03:34 15 willful blindness. Willful blindness is a factor to consider  
03:34 16 with respect to willfulness.

03:34 17 An infringer may be found liable for willful infringement  
03:34 18 only if it had actual knowledge of the patent or deliberately  
03:34 19 infringed the patent or deliberately acted despite a risk of  
03:34 20 infringement that was so obvious it should have been known.

03:34 21 I will now instruct you on the rules that you must follow  
03:34 22 in deciding whether or not Intel has proven that the asserted  
03:34 23 claims of the '759 patent are invalid. Intel does not contend  
03:34 24 that the asserted claims of the '373 patent are invalid.

03:35 25 To prove that any claim of a patent is invalid, Intel must

03:35 1 persuade you by clear and convincing evidence. That is, you  
03:35 2 must be left with a clear conviction that the claim is invalid.

03:35 3 Even though at least two Patent Office examiners have  
03:35 4 allowed the asserted claims are valid, you have the  
03:35 5 responsibility for deciding whether Intel has met its burden of  
03:35 6 proof -- burden of proving by clear and convincing evidence  
03:35 7 that the claims of the patents are invalid.

03:35 8 In order for someone to be entitled to a patent, the  
03:35 9 claimed invention must actually be new over what came before,  
03:35 10 which is referred to as the prior art.

03:35 11 The parties agree that Intel's Yonah processor can be used  
03:35 12 as prior art.

03:35 13 VLSI denies that Intel's Yonah processor anticipates any  
03:35 14 of the claims of the '759 patent because it did not have each  
03:35 15 and every one of the elements of any of those claims arranged  
03:36 16 as in the claim.

03:36 17 When a party challenging the validity of a patent presents  
03:36 18 evidence that was not considered by the Patent Office examiners  
03:36 19 during the prosecution of the application and not cumulative of  
03:36 20 other evidence that was considered by the Patent Office which  
03:36 21 resulted in the issued patent, such new evidence may be given  
03:36 22 more weight and may make it easiest to satisfy a party's clear  
03:36 23 and convincing evidence burden.

03:36 24 The patent laws of the United States require that an  
03:36 25 invention must be new for a person to be entitled to a patent.

03:36 1 Anticipation must be determined on a claim-by-claim basis for  
03:36 2 anticipation.

03:36 3 Intel must prove by clear and convincing evidence that all  
03:36 4 the requirements of a claim are present in a single piece of  
03:36 5 prior art.

03:36 6 To anticipate the claim dimension, the prior art does not  
03:36 7 have the use -- have to use the same words as to the claim, but  
03:36 8 all requirements of the claim must have been disclosed and  
03:36 9 arranged as in the claim.

03:37 10 The claim requirements must be disclosed explicitly or  
03:37 11 expressly, such that a person having ordinary skill in the  
03:37 12 art -- in the art of computer processors, looking at that one  
03:37 13 reference could make and use the claimed invention.

03:37 14 Damages. If you find that Intel infringed any valid claim  
03:37 15 of either of the VLSI patents, you must then consider what  
03:37 16 amount of damages to award to VLSI.

03:37 17 I will now instruct you about the measure of damages. By  
03:37 18 instructing you on the damages, I'm not suggesting which party  
03:37 19 should win the case on any issue. If you find that Intel has  
03:37 20 not infringed any valid claim of either of the asserted  
03:37 21 patents, then VLSI is not entitled to damages. The damages you  
03:37 22 award, if any, must be adequate to compensate VLSI for its  
03:37 23 infringement -- for the infringement by Intel.

03:37 24 They are not meant to punish an infringer. Your damage  
03:37 25 award, if you reach this issue, should not be less than what

03:38 1 the patent holder would have received had it been paid a  
03:38 2 reasonable royalty.

03:38 3 VLSI has the burden to establish the amount of its damages  
03:38 4 by a preponderance of the evidence. In other words, you should  
03:38 5 award only those damages that VLSI establishes that are more  
03:38 6 likely than not.

03:38 7 While VLSI is not required to prove the amount of its  
03:38 8 damages with mathematical precision, it must prove them with  
03:38 9 reasonable certainty. You may not award damages that are  
03:38 10 speculative, that are only possible or that are based on  
03:38 11 guesswork.

03:38 12 In this case VLSI seeks damages in the form of what it  
03:38 13 contends to be a reasonable royalty.

03:38 14 You must be careful to ensure that award is no more and no  
03:38 15 less than the value that the patented inventions have provided  
03:38 16 to Intel.

03:38 17 A reasonable royalty is defined as the amount the patent  
03:38 18 owner and the alleged infringer would have agreed to if a  
03:38 19 hypothetical negotiation had taken place at the time just prior  
03:38 20 to when any infringement first began.

03:38 21 In considering this hypothetical negotiation, you should  
03:39 22 focus on what the expectation of the patent owner and the  
03:39 23 alleged infringer would have been had they entered into an  
03:39 24 agreement at that time and had they acted reasonably in their  
03:39 25 negotiation.

03:39 1       Unlike a real-world negotiation, all parties to a  
03:39 2 hypothetical negotiation are presumed to believe the patents  
03:39 3 are valid and infringe, and that both parties were willing to  
03:39 4 enter into an agreement, the reasonable royalty that you  
03:39 5 determine must be a royalty that would have resulted from the  
03:39 6 hypothetical negotiation and not simply a royalty either party  
03:39 7 would have preferred.

03:39 8       Evidence of things that happen after the infringement  
03:39 9 first began can be considered in evaluating the reasonable  
03:39 10 royalty, only to the extent that the evidence aids in assessing  
03:39 11 what royalty would have resulted from the hypothetical  
03:39 12 negotiation just prior to the first infringement.

03:39 13       The reasonable royalty award must be based on the  
03:39 14 incremental value that the patented invention adds to the end  
03:40 15 product. When the infringing products or methods have both  
03:40 16 patented and unpatented features, measuring this value requires  
03:40 17 a determination of the value added by the patented features.

03:40 18       An appropriate combination of royalty base and royalty  
03:40 19 rate must reflect the value attributable to the infringing  
03:40 20 features, if any, of the Intel products and methods and no  
03:40 21 more.

03:40 22       Any amount of damages must be based on the value  
03:40 23 attributable to the patented invention as distinct from  
03:40 24 unpatented features of the accused products or other factors  
03:40 25 such as marketing or advertising.

03:40 1 A royalty compensating the patent owner for the damages  
03:40 2 must reflect the value attributable to the infringing features  
03:40 3 of the product and no more.

03:40 4 The process of separating the value of the alleged  
03:40 5 infringing features from the value of all other features is  
03:41 6 called apportionment. When the products accused of  
03:41 7 infringement for both patented and unpatented features, your  
03:41 8 award must be apportioned as to what is based only on the value  
03:41 9 of the patented features and no more.

03:41 10 Page 37 is my least favorite page to have to read.

03:41 11 (Laughter.)

03:41 12 THE COURT: Because it's single spaced, but I'll do it.

03:41 13 In determining the amount of reasonable royalty, you may  
03:41 14 consider evidence of any of the following factors, in addition  
03:41 15 to any other evidence presented by the parties on the economic  
03:41 16 value of the patent: Any royalties received for licensing of  
03:41 17 the patents-in-suit, proving or tending to prove an establish  
03:41 18 royalty rates paid by Intel to license other patents comparable  
03:41 19 to the VLSI patents; the nature and scope of the license as  
03:41 20 exclusive or non-exclusive as restricted or non-restricted in  
03:41 21 terms of its territory or with respect to whom the manufactured  
03:41 22 product must be sold; the commercial relationship between the  
03:41 23 licensor and the licensee, such as whether or not they are  
03:42 24 competitors in the same territory in the same line of business;  
03:42 25 the effect of selling the patented products or methods in

03:42 1 promoting other sales of the licensee, which is Intel; the  
03:42 2 existing value of the claimed invention to the licensor as a  
03:42 3 generator of sales of its non-patented items and the extent of  
03:42 4 such collateral sales; the duration of the VLSI patents and the  
03:42 5 terms of the license; the established profitability of the  
03:42 6 products made under the VLSI patents; their commercial success  
03:42 7 and their popularity; the utility and advantages of the  
03:42 8 patented invention over the old modes or devices, if any, that  
03:42 9 have been used for achieving some of the results; the nature of  
03:42 10 the patented inventions; the character of any commercial  
03:42 11 embodiment of it as owned and produced by or for the licensor  
03:42 12 and the benefits, if any, to those that have used the claimed  
03:42 13 invention; the extent, if any, to which Intel has made use of  
03:43 14 the claimed invention and any evidence that shows the value of  
03:43 15 that use; the portion of the profit or of the selling price  
03:43 16 that may be customary in the particular business or in  
03:43 17 comparable businesses to allow for the use of the inventions or  
03:43 18 analogs -- analogous inventions; the portion of the profit that  
03:43 19 arises from the patented inventions themselves as opposed to  
03:43 20 profit arising from unpatented features, such as the  
03:43 21 manufacturing process, business risks or significant features  
03:43 22 or improvements added by the accused infringer; the opinion  
03:43 23 testimony of qualified experts; the amount that a licensor and  
03:43 24 a licensee would have agreed upon at the time of the  
03:43 25 infringement began if both sides had been reasonable and --

03:43 1 reasonably and voluntarily trying to reach an agreement, that  
03:43 2 is, the amount which a prudent licensee who desired as a  
03:43 3 business proposition to obtain a license to manufacture and  
03:43 4 sell a particular article embodying the patented invention  
03:44 5 would have been willing to pay as a royalty and yet be able to  
03:44 6 make a reasonable profit and which amount would have been  
03:44 7 acceptable by a patentee who was willing to grant a license;  
03:44 8 any other economic factor that a normally prudent business  
03:44 9 person would under similar circumstance take into consideration  
03:44 10 in negotiating a hypothetical license.

03:44 11 No one factor is dispositive. And you can and should  
03:44 12 determine -- consider the evidence that has been presented to  
03:44 13 you in the case on each of these factors.

03:44 14 You may also consider any other factor which in your mind  
03:44 15 would have increased or decreased the royalty the alleged  
03:44 16 infringer would have been willing to pay and the patent owner  
03:44 17 would have been willing to accept acting as normally prudent  
03:44 18 business people.

03:44 19 If you believe that -- that on any issue you must decide,  
03:44 20 including but not limited to damages, if you determine either  
03:44 21 party has failed to keep proper records, then any confusion or  
03:45 22 difficulty that you encounter in resolving the issue should be  
03:45 23 held against the party who failed to keep the records and not  
03:45 24 against the other party.

03:45 25 The existence of any comparable damages agreement or other

03:45 1 transactions may inform your decision as to the proper amount  
03:45 2 and form of the reasonable royalty award.

03:45 3       Whether a particular patent agreement or other transaction  
03:45 4 is comparable to the hypothetical license depends on many  
03:45 5 factors, such as whether they involve comparable technologies,  
03:45 6 comparable economic circumstances, comparable structures and  
03:45 7 comparable scope and agreement may be comparable even if the  
03:45 8 patented technology and economic circumstances of the agreement  
03:45 9 are not identical to the hypothetical license.

03:45 10       While the parties to the hypothetical negotiation assume a  
03:45 11 patent is valid and infringed, an agreement may be comparable  
03:45 12 even if there's been no determination or assumption by the  
03:45 13 parties to the agreement that the patent is valid and  
03:45 14 infringed.

03:45 15       The question is whether the agreement is sufficiently  
03:45 16 comparable that it provides a reasonable indication of how the  
03:45 17 parties to the hypothetical negotiation would have negotiated a  
03:46 18 license to the asserted patents.

03:46 19       However, if you choose to rely upon evidence from any  
03:46 20 license agreements, you must account for any differences  
03:46 21 between those licenses and the hypothetically negotiated  
03:46 22 license between the patent owner and the accused infringer in  
03:46 23 terms of the technologies and economic circumstances of the  
03:46 24 contracting parties when you make your reasonable royalty  
03:46 25 determination.

03:46 1       The hypothetical license is deemed to be a voluntary  
03:46 2 agreement. When determining if a license agreement is  
03:46 3 comparable to the hypothetical license, you may consider  
03:46 4 whether the license agreement is or was between parties who  
03:46 5 were involved in a lawsuit.

03:46 6       Reasonable royalty awards can take the form of a lump sum  
03:46 7 payment. A lump sum payment is equal to an amount that the  
03:46 8 alleged infringer would have paid at the time of a hypothetical  
03:46 9 negotiation for licensing covering all the sales of the  
03:46 10 licensed product, both past and future.

03:46 11       When a lump sum is paid, the infringer pays a single price  
03:46 12 for a license covering both past and future infringing sales.  
03:47 13 In determining whether a lump sum payment is appropriate, you  
03:47 14 may consider whether the parties to the hypothetical  
03:47 15 negotiation accepted lump sum payments in connection with the  
03:47 16 comparable patent agreements.

03:47 17       Reasonable royalty awards may also take the form of a  
03:47 18 running royalty based on the revenue from the volume of sales  
03:47 19 of the licensed products. A running royalty can be calculated,  
03:47 20 for example, by multiplying a royalty base by a royalty rate.

03:47 21       Running royalty awards may also be calculated as a lump  
03:47 22 sum over a certain period of time, as VLSI has done here, or as  
03:47 23 an effective per-unit rate for each infringing unit multiplied  
03:47 24 by the total number of infringing units.

03:47 25       All of these methods are designed to compensate the patent

03:47 1 owner for any infringement. It is up to you, based on the  
03:47 2 evidence, to decide what type of royalty, if any, is  
03:47 3 appropriate in this case.

03:47 4 It is now your duty -- we've basically gotten through the  
03:47 5 legal part. This is -- just applies to what you're going to do  
03:48 6 now. So I'm going to read this a little more slowly, and this  
03:48 7 will instruct you how you're to comport yourself as jurors.

03:48 8 It is now your duty to deliberate and consult with one  
03:48 9 another in an effort to reach a verdict. Each of you must  
03:48 10 decide the case for yourself, but only after an impartial  
03:48 11 consideration of the evidence with your fellow jurors.

03:48 12 During your deliberations, do not hesitate to reexamine  
03:48 13 your own opinions and change your mind if you are convinced  
03:48 14 that you were wrong, but do not give up on your honest beliefs  
03:48 15 because other jurors think differently or just to finish the  
03:48 16 case.

03:48 17 Remember at all times you are the judges of the facts.

03:48 18 You've been allowed to take notes during the trial. Any  
03:48 19 notes that you took during the trial are only aids to your  
03:48 20 memory. If your memory differs from your notes, you should  
03:48 21 rely on your memory and not your notes. The notes are not  
03:48 22 evidence.

03:48 23 If you did not take notes, rely on your independent  
03:49 24 recollection of the evidence and do not be unduly influenced by  
03:49 25 the notes of other jurors. Notes are not entitled to greater

03:49 1 weight than the recollection or impression of each juror about  
03:49 2 the testimony.

03:49 3       When you go into the jury room to deliberate, you may take  
03:49 4 with you a copy of this charge, the exhibits that I've admitted  
03:49 5 into evidence and your notes. You must select a jury  
03:49 6 foreperson to guide you in your deliberations and to speak for  
03:49 7 you here in the courtroom.

03:49 8       Your verdict must be unanimous. After you have reached a  
03:49 9 unanimous verdict, your jury foreperson must fill out the  
03:49 10 answers to the written questions on the verdict form and sign  
03:49 11 and date it.

03:49 12       After you've concluded your service and I have discharged  
03:49 13 the jury, you are not required to talk with anyone about the  
03:49 14 case. More about that after you conclude.

03:49 15       If you need to communicate with me during your  
03:49 16 deliberations, the jury foreperson -- there'll be -- I'm going  
03:49 17 to go a little off script here just because it is easier for me  
03:50 18 to tell you what is going happen.

03:50 19       You'll have juror notes back there. If you want to ask me  
03:50 20 a question, the very first note you're going to send me is  
03:50 21 this: You're going to tell me, Ms. X or Mr. Y is the jury  
03:50 22 foreperson. And that will come out here, and I will tell the  
03:50 23 ladies and gentlemen who that is.

03:50 24       From then on, if while you're deliberating you have a  
03:50 25 question you would like the Court to address, you write it down

03:50 1 on a jury note, you hand it to our marshal, he will bring it in  
03:50 2 to me. I come in here. I discuss it with the lawyers and tell  
03:50 3 them how I'm going to respond. I will write down an answer,  
03:50 4 and I will send it back to you to each question. And then we  
03:50 5 will keep the jury notes as part of the record in this case.

03:50 6 Let me go back to what I've written here, though, just to  
03:50 7 make sure.

03:50 8 Keep in mind, however, that you must never disclose to  
03:50 9 anyone, not even me, your numerical division at that time.

03:51 10 Don't ever write down, "right now we are X versus Y number of  
03:51 11 people." We never -- that never gets written down. We never  
03:51 12 hear anything until you tell me you have the unanimous verdict,  
03:51 13 and then I'll read the unanimous verdict.

03:51 14 This again is very important because you're going to go  
03:51 15 away overnight. During your deliberations, you may not  
03:51 16 communicate with any information about this case to anyone by  
03:51 17 any means. For example, do not talk face-to-face or use any  
03:51 18 electronic device or media, such as a telephone. You -- I  
03:51 19 won't read out the whole list here, but let me make sure --  
03:51 20 if -- and you cannot use any form of media or technology to  
03:51 21 communicate with anyone about this case.

03:51 22 The only people you can talk to about this case are the  
03:51 23 seven of you, and that's within the confines of the jury -- I'm  
03:51 24 calling it the jury room, but wherever it is that you all are  
03:51 25 seated right now.

03:51 1 You cannot talk to anyone on the phone, correspond with  
03:52 2 anyone or electronically communicate with anyone in this case.  
03:52 3 Remember the oath that I gave you at the beginning, and you're  
03:52 4 compelled to follow my instructions.

03:52 5 So there is one stipulation I'm going to read. And  
03:52 6 remember I told you earlier, if the parties enter into a  
03:52 7 stipulation, you must follow the stipulation.

03:52 8 (Sealed proceedings.)

03:52 9 MR. LEE: Your Honor, the stipulation is not public. This  
03:52 10 was confidential.

03:52 11 THE COURT: I apologize, Mr. Lee.

03:52 12 Then what we will do is this: We're going to -- if --  
03:52 13 with permission of counsel, we're going to take a very short  
03:53 14 recess just so you all can do whatever it is you do for five or  
03:53 15 ten minutes and the parties can as well.

03:53 16 What I'm going to ask is if you are not covered by the  
03:53 17 protective order, please give me five minutes before you come  
03:53 18 in. If you'll stay outside, I'll make sure someone tells you  
03:53 19 when we begin the closing arguments. It'll be about five  
03:53 20 minutes after I bring the jury in. I will read to the jury the  
03:53 21 stipulation, and then we'll commence with closing arguments, if  
03:53 22 that's okay with counsel.

03:53 23 MR. CHU: Yes. It is, Your Honor.

03:53 24 THE COURT: Mr. Lee?

03:53 25 MR. LEE: It's good with us, Your Honor.

03:53 1       THE COURT: I apologize for reading that portion of it. I  
03:53 2 was unaware.

03:53 3       Ladies and gentlemen of the jury, I lied earlier. I will  
03:53 4 tell you one more time, you cannot discuss the case amongst  
03:53 5 yourselves because I have not dismissed you to begin  
03:53 6 deliberating. However, that's coming soon.

03:53 7       So it is 3:53. I'm going to -- let's start at 4:10.

03:54 8 That -- you'll have 15 minutes. That'll give the lawyers an  
03:54 9 opportunity to get coordinated.

03:54 10       At 4:10 I'm going to bring the jury in. I'm going to read  
03:54 11 you the stipulation. And then anyone who is not -- who is part  
03:54 12 of the public but not part of the protective order will be free  
03:54 13 to come in and hear from counsel for the plaintiffs and  
03:54 14 defendants.

03:54 15       So you can all -- you are dismissed.

03:54 16       THE BAILIFF: All rise.

03:54 17       (Jury exited the courtroom at 3:54.)

03:54 18       THE COURT: I assume there's nothing to take up?

03:54 19       MR. CHU: Something very small on the verdict form. At  
03:54 20 the very end where the choice of "one-time lump sum" or  
03:54 21 "royalty for past sales" was added, the lead into that reads,  
03:55 22 "One, a running royalty in the form of a lump sum for past  
03:55 23 damages only or, two, a lump sum for all damages," and then it  
03:55 24 reverses the order.

03:55 25       So I think Ms. Proctor has already sent to opposing

03:55 1 counsel and Mr. Pearson a proposed correction, which would just  
03:55 2 make it parallel in terms of the order and to use the same  
03:55 3 language that's in the sentence that precedes the boxes that  
03:55 4 they would check.

03:55 5 MR. TOMPROS: And, Your Honor, I don't want you to think  
03:55 6 that we were not paying attention to your instructions, but  
03:55 7 Ms. Proctor and I were e-mailing during the course of that, and  
03:55 8 we have reached an agreement. And I think Mr. Pearson has it.

03:55 9 THE COURT: I would never assume that you weren't  
03:55 10 listening. I'm surprised that anyone could survive that death  
03:55 11 march, but apparently we didn't lose any jurors during the  
03:55 12 course of it.

03:55 13 So but, you know, if you think about it for just a second,  
03:56 14 what -- with great lawyers like you, what better lead-up would  
03:56 15 you rather have to make yourselves look great than to make them  
03:56 16 listen to me do that for 45 minutes?

03:56 17 If you can't -- if the two of you can't improve on what I  
03:56 18 just did, then you're in the wrong profession. And I know --  
03:56 19 with a hundred years of combined experience, I don't think that  
03:56 20 we're in much danger of that.

03:56 21 So I'll be back in about ten minutes, and I very much look  
03:56 22 forward to these closing arguments.

03:56 23 THE BAILIFF: All rise.

03:56 24 (Recess taken from 3:56 to 4:10.)

04:10 25 THE BAILIFF: All rise.

04:10 1 THE COURT: Please remain standing for the jury.

04:10 2 (The jury entered the courtroom at 4:10.)

04:11 3 THE COURT: Thank you. You may be seated.

04:11 4 Again, with reminder that no one who's not under the  
04:11 5 protective order should be here for just the reading of the  
04:11 6 stipulation.

04:11 7 (Sealed proceedings.)

04:13 8 THE COURT: That's the end of the stipulation.

04:13 9 Hannah, why don't you go let folks know that they can come  
04:13 10 in?

04:14 11 I believe what we are handing out are notebooks that  
04:14 12 contain photos of all the witnesses so that if someone is  
04:14 13 referenced, you can look and it's a reminder of who the  
04:14 14 witnesses were.

04:14 15 LAW CLERK: Does everybody have one?

04:14 16 THE COURT: Mr. Chu, are you ready to proceed?

04:14 17 MR. CHU: Yes, Your Honor.

04:14 18 THE COURT: You may do so.

04:14 19 OPENING ARGUMENT ON BEHALF OF THE PLAINTIFF

04:14 20 MR. CHU: May it please the Court.

04:14 21 Ladies and gentlemen of the jury, I want to thank you.

04:15 22 You were first called to jury duty quite some time ago, and  
04:15 23 there were weather delays and tough times for all of us because  
04:15 24 of the weather problems. But you are serving as a part of our  
04:15 25 justice system, and you help make that system work well.

04:15 1 We are here in part because our founders had the foresight  
04:15 2 to put a provision in the United States Constitution to promote  
04:15 3 the progress of science, and that's what has happened in the  
04:15 4 United States for over the last 200 years. That has made us  
04:15 5 the world's leader in technology, whether it was in the 1800s,  
04:16 6 the 1900s, up until today.

04:16 7 And Congress has passed statutes protecting patents and  
04:16 8 invention. It's a bargain and it's simple. You disclose your  
04:16 9 valuable inventions, and in exchange, no one can use your  
04:16 10 inventions without permission.

04:16 11 You heard from James Spehar, a vice president at NXP. He  
04:16 12 explained the relationship between NXP and VLSI and why they  
04:16 13 teamed up. If somebody's using our patent and then they won't  
04:16 14 work with us on licensing, it's not our expertise. So that's  
04:16 15 why we would go with a company like VLSI.

04:16 16 And David Bearden, the '373 patent inventor, discussed the  
04:17 17 cycle of innovation, NXP inventing and applying for patents  
04:17 18 from the Patent Office and, if granted, then NXP could decide,  
04:17 19 as it did here, to assign the patents to VLSI with the hope  
04:17 20 that there would be reasonable royalties paid, and then there  
04:17 21 would be some reinvestment into more R&D at NXP.

04:17 22 This is in some ways a complicated case, but in other ways  
04:17 23 it's a simple case. And here's why: You would expect that  
04:17 24 employees of the defendant, Intel Corporation, would come and  
04:17 25 deny infringement. They're obviously interested. They're

04:17 1 full-time employees at Intel.

04:18 2 We have another group of witnesses from both sides, and

04:18 3 they are independent experts. They're all compensated.

04:18 4 They're all compensated pretty well. They all spent hundreds

04:18 5 of hours writing lengthy reports and having their depositions

04:18 6 taken. They've all, in total, have had compensation that may

04:18 7 be in the several hundreds of the thousands of dollars. But in

04:18 8 no case are they full-time employees of either side. They are

04:18 9 in a sense independent experts even though one side or the

04:18 10 other may engage them to come and provide testimony for you.

04:18 11 This is a credibility case. And in that sense, despite

04:18 12 all of the technology you've heard about, this case is one of

04:18 13 credibility. It's credibility of all the witnesses, but if you

04:19 14 think of the independent experts, some engaged by Intel and in

04:19 15 one case engaged by VLSI, you have the ability as well as any

04:19 16 other human being to consider and assess the credibility of

04:19 17 witnesses.

04:19 18 That's an ability that you were born with. That's an

04:19 19 ability that you learned over time. It's not something that

04:19 20 someone learns going to school. It's something you learn

04:19 21 through your life experiences.

04:19 22 And that's why in different civil cases, in criminal cases

04:19 23 and in patent cases, our system recognizes that jurors just

04:19 24 like yourself have the ability to determine the credibility of

04:20 25 one side or the other.

04:20 1 In that sense, it is a simple case despite the technology,  
04:20 2 and it's a case where often, including in a patent case, the  
04:20 3 case turns on credibility of expert witnesses.

04:20 4 The Court's Instruction No. 7 said, "You alone determine  
04:20 5 the questions of credibility or truthfulness of the witnesses.  
04:20 6 You may consider the witness' manner and demeanor, any feelings  
04:20 7 or interest in the case, any prejudice or bias about the case  
04:20 8 and the consistency or inconsistency of the witness'  
04:20 9 testimony."

04:20 10 So let's look at some of the evidence that you heard. The  
04:20 11 notebooks you have have photographs of the witnesses and lined  
04:21 12 papers if you want to take notes there or in the other  
04:21 13 notebooks that you've had.

04:21 14 You will not have in the jury room these sets of slides  
04:21 15 being used either by VLSI or Intel in closing argument. So if  
04:21 16 you want to make note of particular exhibits, they will be in  
04:21 17 evidence or particular testimony that is in evidence, but these  
04:21 18 slides will not be in the jury room.

04:21 19 So we heard from Dr. Rotem, an Intel employee, and he was  
04:21 20 discussing Yonah. And he said, "And I said Yonah did not have  
04:21 21 a hardware controller."

04:21 22 This is important because Intel is trying to invalidate a  
04:22 23 patent based on their claim that Yonah anticipates, meets every  
04:22 24 limitation of the claims of the patent. If one item is  
04:22 25 different, it cannot anticipate and cannot, cannot invalidate

04:22 1 the patent.

04:22 2 One of the key elements in the patent claim is a  
04:22 3 programmable clock controller which is a hardware controller.

04:22 4 That language is in the claims. And Dr. Rotem, before you,  
04:22 5 admitted that Yonah did not have a hardware controller.

04:22 6 That's it. That's the end of their invalidity case. But  
04:23 7 we'll go over some additional details.

04:23 8 Here's what Dr. Grunwald, the expert engaged by Intel,  
04:23 9 said on Friday, just last week:

04:23 10 "Do you agree or disagree with that testimony of  
04:23 11 Dr. Rotem?

04:23 12 Answer: "I disagree with that testimony."

04:23 13 That was very clear-cut. He didn't like what Dr. Rotem  
04:23 14 said because that gives up the invalidity case. He has the  
04:23 15 weekend. He comes back to court today, and what did we hear  
04:23 16 this morning?

04:23 17 Dr. Grunwald:

04:23 18 Question: "You have no reason to disagree with Dr. Rotem,  
04:23 19 do you?" The question coming from Intel's counsel.

04:23 20 Answer: "No. None."

04:23 21 What does that tell you about credibility? On Friday he  
04:24 22 disagrees directly with Dr. Rotem. He wants to, he has to  
04:24 23 because otherwise the invalidity case is gone. And then right  
04:24 24 after the weekend, he comes back and directly contradicts  
04:24 25 himself.

04:24 1 And there are general rules about credibility. If someone  
04:24 2 is making a statement on a material fact and they change their  
04:24 3 testimony, and in this case a 180-degree change, that is  
04:24 4 something that you as jurors can weigh and consider.

04:24 5 Here's more. Dr. Grunwald:

04:24 6 Question: "The '759 patent specifically discussed the  
04:24 7 fact that Mr. Henson wanted to make faster speed changes in the  
04:24 8 processor, correct?

04:24 9 Answer: "I can't answer that," despite his many, many  
04:25 10 hours of studying the subject matter.

04:25 11 Later the same day:

04:25 12 Question: "Mr. Henson was actually claiming in the patent  
04:25 13 claims a specific embodiment that could have speed changes up  
04:25 14 to a million times a second, correct?"

04:25 15 And he was shown some evidence about that from the patent,  
04:25 16 and he had to admit, yes. Making a 180-degree change in his  
04:25 17 testimony that he had spent hundreds of hours preparing for.

04:25 18 Here's Dr. Sylvester, the other Intel expert. At first he  
04:25 19 gave the testimony:

04:25 20 Question: "Is the VCCR -- let me say that that is the  
04:25 21 voltage regulator, it's the first voltage regulator on the  
04:25 22 bottom of Figure 1 of the patent. Is the VCCR regulating  
04:26 23 during the ramp-down?" Referring to the ramp-down of the  
04:26 24 voltage.

04:26 25 And this is the process where the system is trying to save

04:26 1 power if the circuit doesn't need the power, so it's ramping  
04:26 2 down.

04:26 3 He answers: "No. It is not."

04:26 4 Crystal clear answer.

04:26 5 When shown evidence, he changes his testimony because he  
04:26 6 can't deny it.

04:26 7 Question: "So the Intel engineers want to carefully  
04:26 8 control their programmable ramp-down rate. They want to  
04:26 9 control or regulate the way in which that voltage was being  
04:26 10 decreased to minimize the problems with the chip; is that  
04:26 11 correct?"

04:26 12 Answer: "Apparently. Yes."

04:26 13 He's saying "apparently" because he's confronted with the  
04:26 14 documents that he's had a full opportunity, since this lawsuit  
04:26 15 was filed or since he was engaged to study and now he has to  
04:27 16 come clean.

04:27 17 Dr. Sylvester again:

04:27 18 Question: "You're familiar with problems that can occur  
04:27 19 for Intel chips if the ramp-down is too fast; is that correct?"

04:27 20 Answer: "No."

04:27 21 You may remember the graphic that Professor Conte showed  
04:27 22 you using water as an analogy, as if water just came crashing  
04:27 23 down and broke everything. So Dr. Sylvester is saying that  
04:27 24 he's not familiar with these problems.

04:27 25 Again when shown evidence:

04:27 1       Question: "So the Intel engineers want to carefully  
04:27 2 control their programmable ramp-down rate to minimize the  
04:27 3 problems with the chip; is that correct?"

04:27 4       Answer: "Apparently. Yes."

04:27 5       Again a 180-degree change in his testimony.

04:28 6       Dr. Sylvester again:

04:28 7       Question: "Did you find anything in the Intel documents  
04:28 8 that referred to minimum retention voltage for C6 SRAM?"

04:28 9       That's the memory that's in the Lake processors.

04:28 10      "No. I did not."

04:28 11      Let me just spend a moment because in a way there are  
04:28 12 three kinds of evidence.

04:28 13      There are the Intel witnesses. We expect them to deny  
04:28 14 infringement. That's understandable. There are the experts  
04:28 15 engaged by both sides. And then there's a third type of  
04:28 16 evidence. It's documentary evidence that was in existence  
04:28 17 before this lawsuit was ever filed.

04:28 18      Well, they can't change those documents. So he's saying  
04:28 19 that he didn't find any documents that refer to the minimum  
04:29 20 retention voltage, and then we showed him on cross-examination.

04:29 21      Question: "When Intel engineers use the phrase 'Vmin,'  
04:29 22 that refers to voltage minimum, correct?"

04:29 23      Answer: "Yes."

04:29 24      "And the Vmin for the C6 SRAM was 0.75, correct? Am I  
04:29 25 correct?

04:29 1 Answer: "That's what the document says."

04:29 2 So he was claiming there were no documents that showed

04:29 3 that Intel knew there was a voltage minimum, but there it was

04:29 4 in black and white created by the Intel engineers before this

04:29 5 lawsuit.

04:29 6 Here's Dr. Grunwald again, at 5:17 p.m. on Friday:

04:29 7 Question: "That signal is an output of the high-speed

04:29 8 clock, right? Can you answer it yes or no, sir?"

04:29 9 Answer: "No. I can't answer that yes or no."

04:30 10 Seconds later:

04:30 11 Question: "You can't answer whether the 100 megahertz

04:30 12 output of the BCLCK" -- those are the letters that was on that

04:30 13 diagram that we showed you -- "shown in the Intel diagram is an

04:30 14 output of the clock; is that right? Yes or no."

04:30 15 Answer: "No. It is not."

04:30 16 By 5:18 p.m., he gives a third answer.

04:30 17 Question: "When it leaves the BCLCK on its journey to

04:30 18 another component, it's an output of the BCLCK, correct?"

04:30 19 Answer: "Correct."

04:30 20 Within the space of the minute, he gave three completely

04:30 21 different answers.

04:30 22 The BCLCK, by the way, you may remember, refers to the

04:30 23 base clock. It is the clock that is always running at

04:31 24 100 megahertz, that's always its output and it sends that

04:31 25 output to other circuitry in the Lake processors.

04:31 1 Credibility is so important. And I've shown you just a  
04:31 2 sample of it. If one side has experts who testify  
04:31 3 inconsistently with themselves and inconsistently with other  
04:31 4 fact witnesses, or inconsistently in connection with Intel  
04:31 5 documents, that's something that you can weigh during your  
04:31 6 deliberations.

04:31 7 So let's look more closely at the evidence relating to the  
04:31 8 '759 patent. This is the Henson or the '759 patent. You heard  
04:31 9 evidence about the old approach. This is, in fact, the Yonah  
04:32 10 approach, which used the Windows operating system, and  
04:32 11 obviously Windows was designed outside of Intel.

04:32 12 And the '759 invention involved the programmable  
04:32 13 controller that you see on the slide, and that's a programmable  
04:32 14 controller that is inside the Intel chip itself.

04:32 15 And you may remember that one of the beauties of this is  
04:32 16 when the Windows operating system wanted to make speed changes,  
04:32 17 it would have to get in line where the core would have to do  
04:32 18 the work, but the core was doing a lot of other things.

04:32 19 But with the new '759 invention, there's no waiting in  
04:32 20 line to make those speed changes, just like in the very happy  
04:32 21 circumstance that we sometimes experience when we're in the  
04:32 22 supermarket and there's no waiting in line.

04:32 23 But here it's designed so that there is a dedicated  
04:33 24 check-out line for the speed changes that would enable the  
04:33 25 speed changes to be faster.

04:33 1 How much faster than the old Yonah chip? How much faster?

04:33 2 You heard evidence that the Speed Shift's 300 times faster  
04:33 3 using the '759 invention in the Skylake processors than the old  
04:33 4 way.

04:33 5 Intel's expert thought indeed that the old approach was  
04:33 6 the only approach. He wrote this paper before he was engaged  
04:33 7 by Intel for this case. The decision to change processor speed  
04:33 8 and voltage must be controlled by the operating system, such as  
04:33 9 Windows.

04:33 10 And when asked if he ever had any inkling of an idea of a  
04:34 11 different way to do this so it would not be controlled by the  
04:34 12 operating system, he would have done research and published on  
04:34 13 that, and he agreed, as you can see from this answer.

04:34 14 So he's a person of extraordinary skill in the art. He  
04:34 15 couldn't even think conceptionally to have those speed changes  
04:34 16 done in a way not using the outside operating system.

04:34 17 Professor Conte explained that Matt Henson added a lot of  
04:34 18 hardware. He added pretty much a computer-in-a-computer to do  
04:34 19 this control.

04:34 20 And here you see the claim language referring to a  
04:34 21 programmable clock controller having an embedded computer  
04:34 22 program.

04:34 23 This is a question to Dr. Grunwald:

04:34 24 "Lake product families all have a programmable clock  
04:35 25 controller having an embedded computer program?"

04:35 1 He answered, "Yes."

04:35 2 He answered very clearly yes.

04:35 3 Here's a document, Intel admits infringing Speed Shift is  
04:35 4 revolutionary. And here's an area where experts on both sides  
04:35 5 agree. The PCU is a programmable clock controller.

04:35 6 Does Yonah have a PCU? Professor Conte says no.

04:35 7 Dr. Grunwald says no. And Dr. Rotem also says no. So the old  
04:35 8 way doesn't have the PCU. The new way has that programmable  
04:35 9 controller in the Lake products.

04:35 10 One of the arguments had to do with whether a request is  
04:35 11 made. This was a noninfringement argument.

04:36 12 Professor Conte explained that when you launch Word or  
04:36 13 some other program, it sends to the PCU in the Lake processors  
04:36 14 a request, the Core\_Active signal.

04:36 15 And you may remember Dr. Grunwald's analogy that he put in  
04:36 16 his expert report. And he said, if the customer or patron  
04:36 17 doesn't specifically expressly ask for the check, that's not  
04:36 18 asking for the check.

04:36 19 But on cross-examination he admitted to the following:  
04:36 20 That if, for example, the customer does not have any  
04:36 21 silverware, that's not a request for more silverware. It is a  
04:36 22 statement of condition. But then he had to admit, "I don't  
04:36 23 have any silverware" is a request in his mind, so the statement  
04:36 24 of condition is a request.

04:36 25 So, too, if the customer's dropped a napkin on the floor

04:37 1 without saying anything to the waiter, other than "I dropped my  
04:37 2 napkin on the floor," that is a statement of a condition.

04:37 3 And here's an important point to keep in mind, one could  
04:37 4 twist the meaning of words, and we use words in the English  
04:37 5 language, like "request," to communicate with each other.

04:37 6 But the components of a computer system are not human  
04:37 7 beings. They send signals back and forth, back and forth very,  
04:37 8 very rapidly. And that's what's happening in the infringing  
04:37 9 products.

04:37 10 There's another issue about providing the clock frequency  
04:37 11 of the high-speed clock. And here's testimony about the fact,  
04:37 12 the question was if they wanted to say the same clock  
04:37 13 frequency, he admitted that there was no language of that sort  
04:37 14 in the claims. So he effectively was trying to add a  
04:38 15 requirement for the common clock.

04:38 16 There is clear evidence that the claims at issue for the  
04:38 17 '759 patent are infringed.

04:38 18 Here's evidence on the '373 patent. We say '373, David  
04:38 19 Bearden is the second named inventor. You may remember the  
04:38 20 keys to this invention. It was adding hardware. There were  
04:38 21 two voltage regulators instead of just one, plus this  
04:38 22 fast-switching mux. And what's telltale is there's no dispute  
04:38 23 that's what the infringing products have, two voltage  
04:38 24 regulators and a fast-switching mux.

04:38 25 David Bearden described that this was a way selectively to

04:38 1 manage the voltages between the two circuits that could save  
04:38 2 power.

04:38 3         Then there was a dispute about a minimum operating  
04:39 4 voltage. Dr. Sylvester created a graph specifically for this  
04:39 5 litigation to present to you. Earlier that day Jonathan  
04:39 6 Douglas, the Intel employee, it was a handwritten graph that  
04:39 7 was almost precisely the same. Both of them showed the  
04:39 8 RING\_RETENTION\_VOLTAGE similar to what you're looking at now  
04:39 9 with one of the ring voltages, VOLTAGE\_0, being below it.

04:39 10         How could it be? Because the system wouldn't work under  
04:39 11 these circumstances. It just wouldn't work. The memory would  
04:39 12 lose current and then wouldn't function.

04:39 13         Well, you heard the explanation from Professor Conte  
04:39 14 today. Dr. Sylvester and apparently Mr. Douglas did not  
04:40 15 volunteer to you that they were mixing apples and oranges.  
04:40 16 Part of the data used 0 degrees Centigrade, that is the  
04:40 17 equivalent of 32 degrees Fahrenheit. That's freezing. That's  
04:40 18 when water freezes to ice.

04:40 19         In the Intel documents themselves, they explain how you  
04:40 20 have to make adjustments, and they didn't make the adjustments.  
04:40 21 They didn't mention that to you, and they didn't mention  
04:40 22 that -- the following, that other data that they used for this  
04:40 23 made-up graph was based on the boiling point of water  
04:40 24 100 degrees Centigrade or 212 degrees Fahrenheit. And they  
04:40 25 were combining data from both of those on a graph to try and

04:40 1 make this point.

04:40 2 They didn't use the Intel graph from its own documents.

04:40 3 So consider that when you are thinking about credibility. They  
04:41 4 had access, obviously, to the Intel documents, and they made up  
04:41 5 documents instead of using the underlying Intel documents.

04:41 6 Here's some testimony about Dr. Sylvester's faulty data,  
04:41 7 where Dr. Conte made this temperature point, and then there's  
04:41 8 the question about the power supply selector. And here's the  
04:41 9 evidence from the Intel documents about their power supply mux.  
04:41 10 And you can see the words are matching up with Element [F] in  
04:41 11 the claim with the actual Intel document.

04:41 12 The Intel documents that existed before this litigation do  
04:41 13 not lie. All the claims of the '373 patent are infringed.

04:41 14 And then there's the question of damages. You heard  
04:42 15 testimony about the hypothetical negotiation. And the Intel  
04:42 16 expert admitted this morning Intel has to assume infringement  
04:42 17 by Intel of nearly a billion products. He has to assume that,  
04:42 18 following the law. He also has to assume that the patents are  
04:42 19 valid.

04:42 20 Here's part of the Court's instructions, that the awarded  
04:42 21 damages should be no less than the value of the patented  
04:42 22 inventions to Intel.

04:42 23 Power and speed are key to competition. You heard that  
04:42 24 from Mr. Spehar of NXP. And he described how it could make a  
04:42 25 big difference, because if you sell millions of parts or

04:42 1 billions of parts, the value to Intel would be enormous.

04:43 2 And David Bearden, the co-inventor of the '373, also  
04:43 3 described this. If there are hundreds of millions of  
04:43 4 microprocessors sold every year, the patent is used to save  
04:43 5 even a little bit of power. In each of those sales, the  
04:43 6 overall benefit and the value to Intel would be enormous.

04:43 7 You heard testimony from Professor Annavaram from USC,  
04:43 8 Professor Conte who teaches at Georgia Tech, and they talked  
04:43 9 about the 1.11 percent performance benefit and the 5.45 percent  
04:43 10 power savings.

04:43 11 You didn't hear contrary testimony from any of the Intel  
04:43 12 witnesses, fact or experts. All they did was criticize the  
04:43 13 testing done by these experts. But never did they do their own  
04:44 14 testing, even though they have all the ability in the world and  
04:44 15 a big performance testing group to run contrary tests.

04:44 16 The patents created speed and power benefits, and there  
04:44 17 were no competing calculations.

04:44 18 Here are the real-world facts in the hypothetical  
04:44 19 negotiation with all the cards on the table. You see the power  
04:44 20 savings amount, the additional revenue. That's additional  
04:44 21 revenue, not total revenue.

04:44 22 The number of about a billion units sold. The performance  
04:44 23 improvement. And in this hypothetical negotiation all that  
04:44 24 information is available to both negotiators.

04:44 25 This is information -- and I'm going to give you an

04:44 1 opportunity to write it down. So you see the first row is the  
04:44 2 '373 patent. And then the next number over, under "Additional  
04:44 3 Revenues," those are the additional revenues from the use of  
04:45 4 the '373 patent.

04:45 5 And then the next number over which starts with a three is  
04:45 6 the number of infringing units. And the next two numbers are  
04:45 7 the most important.

04:45 8 One is the effective rate per unit. You can see it's a  
04:45 9 reasonable number of several dollars per unit. And then  
04:45 10 because of the number of units sold, the total reasonable  
04:45 11 royalty is the number you see in that last column that is  
04:45 12 highlighted in yellow.

04:45 13 On the second row you see the same information for the  
04:45 14 '759 patent. The additional revenues, the infringing units and  
04:46 15 then importantly, in the last two columns, the effective rate  
04:46 16 per unit, which is the easiest way to judge whether this is or  
04:46 17 is not a reasonable royalty.

04:46 18 So that's a very important number, the effective rate per  
04:46 19 unit for each of the two patents. And then you see the  
04:46 20 reasonable royalty, the total amount, based on the number of  
04:46 21 units sold.

04:46 22 Now, you see on this the exact number for the reasonable  
04:46 23 royalty, but I'm going to just round it off and make it easier.  
04:46 24 Because when we see numbers, it's very hard for us to determine  
04:46 25 how to think about it.

04:46 1 Now, I've put in black those two numbers but in a way  
04:46 2 that's easier for us to understand what they are. Again, here  
04:46 3 you see the reasonable per-unit rates. And then let's look at  
04:47 4 Intel's excuses.

04:47 5 They asked, I think, about every witness that came up,  
04:47 6 fact or expert, whether it was used by Freescale or NXP. As  
04:47 7 David Bearden explained, NXP has thousands of products.  
04:47 8 Figuring it out would be a nearly full-time job for many years.  
04:47 9 There'd be no reason to do it because NXP has permission to use  
04:47 10 the invention that they had developed. And it's not related at  
04:47 11 all to whether Intel infringes.

04:47 12 From the first witness who was asked the question, the  
04:47 13 witness responded with the full answer, but they wanted to ask  
04:47 14 every witness the same thing.

04:47 15 Here's a jury instruction where in determining  
04:47 16 infringement you must compare Intel's accused products and  
04:47 17 methods to the claims of the patents.

04:48 18 Next excuse, Intel says -- claims it has no knowledge of  
04:48 19 the patents. But a party can infringe a patent without knowing  
04:48 20 of the patent or without knowing that what the party is doing  
04:48 21 is patent infringement. That's the law as you can see.

04:48 22 And here's Intel's infringement with the date of the grant  
04:48 23 of the '759 patent, when Intel was designing those products,  
04:48 24 when Intel launched its '759 technology and then all of those  
04:48 25 processors that it brought online year after year after year so

04:48 1 that they became their mainstream processors across the board.

04:48 2 The next excuse by Intel was to say, oh, we did  
04:48 3 independent development. But even if a party independently  
04:48 4 creates the accused product, it can still infringe. And that  
04:49 5 was part of the judge's instruction earlier this afternoon.

04:49 6 The next excuse was witnesses never heard of the patent  
04:49 7 numbers. Well, they're incredibly famous inventions. Edison's  
04:49 8 invention that relates to the patent on light bulbs as an  
04:49 9 example. The Wright brothers had patents on their flying  
04:49 10 machine. Nobody knows the patent numbers, but engineers know  
04:49 11 when there's a great advance and engineers know when it's put  
04:49 12 into as many as a billion products. They just don't recognize  
04:49 13 the patent numbers.

04:49 14 Intel has sold nearly a billion processors that infringe  
04:49 15 these two patents. That's uncontradicted.

04:49 16 In conclusion, the United States Patent Office awarded the  
04:49 17 patents after careful examination. The evidence shows that  
04:49 18 Intel infringes and the damages are based on about a billion  
04:50 19 Intel products that use the patented technology.

04:50 20 Thank you very much, ladies and gentlemen.

04:50 21 CLOSING ARGUMENT ON BEHALF OF THE DEFENDANT

04:50 22 MR. LEE: Your Honor, ladies and gentlemen of the jury,  
04:50 23 Mr. Mueller and I will be splitting the closing. He will be  
04:50 24 closing to you first, then I will follow him and finish for us.

04:50 25 MR. MUELLER: Good afternoon, ladies and gentlemen. And I

04:50 1 want to start by saying thank you for your careful time and  
04:50 2 attention over the last week. We are grateful. And on behalf  
04:51 3 of my colleagues and our client Intel, I just want to say thank  
04:51 4 you.

04:51 5 Now, you have seen all of the evidence go in over the last  
04:51 6 week. And a series of witnesses have walked right here past  
04:51 7 you to the witness stand. And each of them stopped along the  
04:51 8 way and they took the oath. And they swore to tell the truth,  
04:51 9 the whole truth and nothing but the truth.

04:51 10 And I -- even if you're not a trial lawyer, you've  
04:51 11 probably heard that many times over the years in movies and TV  
04:51 12 shows. And sometimes you can hear it and not really think  
04:51 13 about what it means, but it's important. It's very important  
04:51 14 to our system of justice to take the stand, take the oath, tell  
04:51 15 the truth. Tell the whole truth. And that's what we tried to  
04:51 16 do over this case. The best way to help a jury like yourselves  
04:51 17 reach a fair and just result is to tell the truth.

04:51 18 So what we have done is called as witnesses three top  
04:52 19 Intel engineers with personal knowledge of how these products  
04:52 20 were created. They helped to create them themselves. Two of  
04:52 21 them are Intel fellows. That means they're among the top 120  
04:52 22 engineers out of 70,000 engineers at Intel. Those two are  
04:52 23 among the top 120.

04:52 24 The third engineer we called is a distinguished software  
04:52 25 engineer, one of the most experienced engineers in writing that

04:52 1 type of computer code you heard about. Three extraordinary  
04:52 2 engineers.

04:52 3 We also called Mr. King who had many years at the company  
04:52 4 and has explained the history of it to you.

04:52 5 We called two university professors, each of whom were  
04:52 6 experts in the field.

04:52 7 We called Mr. Huston who worked at IBM for over 30 years,  
04:52 8 for 22 years of experience sitting at the table negotiating  
04:52 9 license agreements.

04:52 10 Now, we called all these folks to give you the truth, to  
04:53 11 give you the whole truth about what happened in this case and  
04:53 12 what matters.

04:53 13 Now, I agree with Mr. Chu. I think all of my colleagues  
04:53 14 agree with Mr. Chu on one point. Credibility is critical.  
04:53 15 It's critical. And you are the judges of credibility in this  
04:53 16 case. It's your job to figure out who came to you and did the  
04:53 17 best job they could to explain the facts, explain the evidence,  
04:53 18 to explain the truth.

04:53 19 Now, again and again -- and you saw it again just now in  
04:53 20 Mr. Chu's closing argument -- you've seen VLSI show you  
04:53 21 portions of documents, and then later on we'd show you the rest  
04:53 22 of the document or portions of a deposition transcript and then  
04:53 23 we had to show you the rest of it. Again and again and again,  
04:53 24 that's happened.

04:53 25 We were trying to give you the full truth the whole way

04:53 1 through this trial, and that's what I'm going to try to do  
04:53 2 right now one last time.

04:53 3 Now, Mr. Chu told you in his opening statement that there  
04:54 4 are two stars, two heros in this case. That was a promise that  
04:54 5 he made to you about what the evidence was going to show.

04:54 6 Now, you've seen the evidence and you know it's just not  
04:54 7 true. Mr. Spehar, the very first witness:

04:54 8 "You hadn't even heard of these two patents until very  
04:54 9 recently, correct?

04:54 10 "Until my deposition."

04:54 11 Dr. Conte, Dr. Annavaram, Dr. Sullivan, the three experts,  
04:54 12 none of them had heard of these patents before this lawsuit.

04:54 13 The Intel engineers, Mr. Douglas, Dr. Rotem,  
04:54 14 Mr. Borkowski, they hadn't heard one word about these patents  
04:54 15 before this case started. Not one word.

04:54 16 Dr. Sylvester, Dr. Grunwald, Mr. Huston never heard  
04:54 17 anything about these patents, these heros and stars. Never  
04:55 18 heard one word about them until this case started.

04:55 19 Now, Mr. Bearden was actually one of the named inventors  
04:55 20 in the '373 patent. He testified when VLSI's lawyer asked him  
04:55 21 questions about the patent. And then it turned out when  
04:55 22 Ms. Sooter cross-examined him, we learned at his deposition he  
04:55 23 barely remembered anything about it. He didn't remember any  
04:55 24 details of the path to the patent. And, in fact, he said that  
04:55 25 he was asked, "Hey, do you remember this patent?" And, you

04:55 1 know, after a little bit of head scratching, then he kind of  
04:55 2 said, "yeah, vaguely."

04:55 3 Just think about that. This is one of the inventors on  
04:55 4 one of the patents. He said it was a head-scratching moment to  
04:55 5 try to remember this patent. If it were a hero, if it were a  
04:55 6 star, you can rest assured the inventor would have remembered  
04:55 7 it.

04:55 8 Now, Dr. Zhang is another inventor on the '373 patent, and  
04:55 9 you heard a portion of his videotaped deposition. And I'm  
04:55 10 going to ask Mr. Lee to play it one more time.

04:56 11 "In your own words, can you tell (audio distortion) the  
04:56 12 '373 patent is?"

04:56 13 "I did not write this document. I don't remember it."

04:56 14 Didn't remember it. And you heard him say that over and  
04:56 15 over again at his deposition.

04:56 16 Now, Mr. Bearden said that tracking down where the  
04:56 17 invention might have been used in actual product would have  
04:56 18 been, as he said, would be formidable, right? A full-time job  
04:56 19 for many years.

04:56 20 So he was essentially saying, don't blame us for not  
04:56 21 knowing whether we used these patents. It's sort of hard to  
04:56 22 track down whether the products were actually using the  
04:56 23 inventions, as if they were an old pair of socks with holes in  
04:56 24 them. Hard to track down.

04:56 25 These are supposed to be incredible inventions, according

04:56 1 to VLSI, that provide great performance benefits. If that's  
04:56 2 true, if that's true, you wouldn't have to track it down.  
04:56 3 You'd know it. You'd know it. More than that, you'd want it.  
04:56 4 You'd want to take these patents and put them into an actual  
04:57 5 product.

04:57 6 But they couldn't identify a single product out of the  
04:57 7 thousands, thousands of NXP products that actually used these  
04:57 8 patents, and the only conclusion you can draw is that there is  
04:57 9 no such product.

04:57 10 They've never used these two patents in actual products.  
04:57 11 If they were such great ideas, they had every incentive in the  
04:57 12 world to do so. They compete in the marketplace against  
04:57 13 companies, including Intel. They're looking for ways to make  
04:57 14 their products better.

04:57 15 If these were truly heros and stars, they would have used  
04:57 16 them. And the reason why we have focused on this issue  
04:57 17 throughout the case is because it does go to credibility. It  
04:57 18 goes to the credibility of the claim that you heard in the  
04:57 19 opening statement, that these are heros and stars. Well,  
04:57 20 they're not. If they were, they would have been used.

04:57 21 Now, witness after witness confirmed this. Mr. Bearden,  
04:57 22 "I don't know of any particular product." Dr. Zhang, "don't  
04:57 23 remember." Mr. Spehar couldn't identify any either.

04:58 24 Dr. Conte said it wasn't his task to identify a product  
04:58 25 made by SigmaTel, Freescale, NXP or VLSI that used these

04:58 1 patents. Dr. Annavaram couldn't identify one either.

04:58 2 Now, I'm going to examine the two infringement claims one  
04:58 3 by one. Before I do, I just want to cut to the heart of what  
04:58 4 they're saying here.

04:58 5 There's not a shred of evidence that the Intel engineers  
04:58 6 copied these patents. Not a shred of evidence. There's no  
04:58 7 evidence that they had these patents in one hand and were doing  
04:58 8 design work in the other.

04:58 9 So the gist of the claim that's being made to you, the  
04:58 10 jury, is that the Intel engineers accidentally ended up within  
04:58 11 the claims of these patents.

04:58 12 Now, as a legal matter, that is possible. You can  
04:58 13 accidentally infringe a patent as a matter of law, but as a  
04:58 14 factual matter, it didn't happen here. It just did not happen  
04:58 15 here. That's not what happened.

04:59 16 So let's look at the patents one by one, and let's start  
04:59 17 with the '373 patent.

04:59 18 Now, in terms of what's at issue for the '373 patent, you  
04:59 19 heard from Mr. Douglas who's a lead architect for decades at  
04:59 20 Intel, along with Mr. Borkowski, the distinguished software  
04:59 21 engineer who has personally written much of that special kind  
04:59 22 of computer code you heard about, the P-code. And they  
04:59 23 described for you the power architecture in portions of the  
04:59 24 Broadwell and Haswell processors that are accused of  
04:59 25 infringement by the '373 patent.

04:59 1 Now, throughout this case we did our best to try to  
04:59 2 explain the facts as best we could, and we wanted you to  
04:59 3 understand the facts because we believe the truth is on our  
04:59 4 side.

04:59 5 So we used things like magnet boards and all sorts of  
04:59 6 stuff to have the witnesses help explain the facts to you as  
04:59 7 best we could. And this is the board that we put together with  
04:59 8 Mr. Douglas, and it shows the components within the ring  
05:00 9 domain. It shows these two power supplies, the VCCR and the  
05:00 10 VCCIO. It shows the package control unit that controls the  
05:00 11 switch that allows for switching between these two power  
05:00 12 supplies, the VCCR and the VCCIO.

05:00 13 Now, of course this is a simplified diagram. There's  
05:00 14 thousands upon thousands of components in these chips, but  
05:00 15 what's at issue here is the power supply to this memory called  
05:00 16 the C6 SRAM.

05:00 17 And as you learned, when the ring components are in  
05:00 18 operation, the power supply comes from the VCCR and it comes at  
05:00 19 different power levels depending on the level of activity of  
05:00 20 the components within the ring domain.

05:00 21 When the components in the ring domain are no longer being  
05:00 22 used, the PCU flips the switch and it goes to the VCCIO, which  
05:00 23 supplies power to the C6 SRAM in that circumstance.

05:00 24 So this is the architecture at issue. It's developed by  
05:01 25 Mr. Douglas and his colleagues. Mr. Borkowski and other folks

05:01 1 created the computer code that implements the architectural  
05:01 2 designs of Mr. Douglas and his colleagues. And that's how it  
05:01 3 works. It does not remotely use the '373 approach, and I'm  
05:01 4 going to explain exactly how.

05:01 5 Here's the claims, okay? Here are the claims at issue for  
05:01 6 the '373 patent. And I have shown the language from each and  
05:01 7 every part of these claims. To infringe a claim, as you heard  
05:01 8 from His Honor, a product needs to do everything required by  
05:01 9 that claim. You need to look at every single part of it and  
05:01 10 find something that matches either literally or equivalently  
05:01 11 each and every part of the claim. If one part is missing,  
05:01 12 there's no infringement.

05:01 13 Now, as you're going to see, there are actually several  
05:01 14 parts that are missing if you compare these claims to the  
05:01 15 architecture that Mr. Douglas, Mr. Borkowski and their  
05:02 16 colleagues developed.

05:02 17 And as we go through this, I want to emphasize that the  
05:02 18 burden of proof is on VLSI. They bear the burden on  
05:02 19 infringement. They need to convince you that each and every  
05:02 20 part of those claims is actually in the Intel products. So  
05:02 21 let's go through it.

05:02 22 First, the claims require determining a minimum operating  
05:02 23 voltage of the memory and storing the minimum operating voltage  
05:02 24 of the memory and then doing certain things with it, which  
05:02 25 we're going to come back to. But just at the very outset, it

05:02 1 requires determining and storing the minimum operating voltage  
05:02 2 of the memory.

05:02 3 Now, it turns out, as Mr. Douglas explained to you, that's  
05:02 4 a complicated, inefficient process to even go about doing that,  
05:02 5 and Dr. Sylvester, Intel doesn't do that. It does not  
05:02 6 determine the minimum operating voltage of the memory and store  
05:02 7 it, then use it in the way that the claims describe. It uses a  
05:02 8 very different architecture.

05:02 9 Now, there's a couple of things that are problems with the  
05:03 10 theory that Dr. Conte, who's the one and only one witness this  
05:03 11 entire trial who says that Intel infringes. The only one is  
05:03 12 Dr. Conte. He's referring to something called the  
05:03 13 RING\_RETENTION\_VOLTAGE, and he's claiming that's minimum  
05:03 14 operating voltage of the memory. Okay. That's the claim  
05:03 15 requirement of the memory.

05:03 16 He says it's the RING\_RETENTION\_VOLTAGE. Well, there's  
05:03 17 one problem right at the outset. It is related to the entire  
05:03 18 ring domain. He conceded this on cross-examination:

05:03 19 "What it's referring to is the entire ring domain,  
05:03 20 correct?

05:03 21 "That's correct."

05:03 22 Here's the ring domain. You've learned about all of the  
05:03 23 various components within it. It's not just the C6 SRAM. It's  
05:03 24 a whole series of components. So it's not the minimum  
05:03 25 operating voltage of the memory. Even what he's referring to

05:03 1 is a ring domain retention voltage, not a memory retention  
05:03 2 voltage.

05:03 3 There's a second problem. It's not a minimum. Now,  
05:03 4 Mr. Chu seemed to suggest just now that Mr. Douglas and  
05:04 5 Dr. Sylvester were somehow making this up. They were. These  
05:04 6 are the facts about how this works.

05:04 7 This is a diagram that you can see right here, that Dr. --  
05:04 8 I'm sorry -- Mr. Douglas testified to. It shows the various  
05:04 9 power supply levels that come out of the VCCR when the VCCR is  
05:04 10 being used to supply power to the ring domain. He testified  
05:04 11 about the RING\_VF\_VOLTAGE\_0, the RING\_VF\_VOLTAGE\_1, the  
05:04 12 RING\_VF\_VOLTAGE\_2, and he compared it to the  
05:04 13 RING\_RETENTION\_VOLTAGE, which is at a higher level than the  
05:04 14 RING\_VF\_VOLTAGE\_0.

05:04 15 Dr. Sylvester confirmed this through analyses of 8 million  
05:04 16 chips, but Mr. Douglas was on the stand and he testified about  
05:04 17 this. Now, you just heard a few minutes ago a suggestion that  
05:04 18 Mr. Douglas and his colleagues, I think to be blunt, the  
05:04 19 suggestion was they were lying to you. You have to remember  
05:04 20 you heard them testify.

05:05 21 When they testified and when they were cross-examined and  
05:05 22 left the stand, did you think they were lying, or did you think  
05:05 23 that person just gave me useful information both on direct and  
05:05 24 cross-examination?

05:05 25 And I would respectfully submit to you the record supports

05:05 1 the latter. Each one of these engineers, including  
05:05 2 Mr. Douglas, took the stand to testify to the truth and  
05:05 3 provided the facts to you, including with respect to these  
05:05 4 power supply levels.

05:05 5 Mr. Douglas wasn't even asked about this temperature  
05:05 6 theory that we heard about for the first time today. If that  
05:05 7 was significant, if this temperature theory we heard from  
05:05 8 Dr. Conte near the very end of the trial was important, why  
05:05 9 didn't they ask Mr. Douglas a single question about it? Not  
05:05 10 one. And as he said on the stand, the voltage level is higher  
05:05 11 in RING\_VF\_VOLTAGE\_0 as compared to the  
05:05 12 RING\_RETENTION\_VOLTAGE.

05:05 13 Now, there was also some reference at the trial to this  
05:06 14 Vmin, and Mr. Chu just mentioned it now. And there's a couple  
05:06 15 things to say about that.

05:06 16 First, this came up for the first time during the  
05:06 17 cross-examination of Dr. Sylvester. Mr. Chu cross-examined,  
05:06 18 including using this document. You see that reference to Vmin?  
05:06 19 There was a suggestion made that that was somehow related to  
05:06 20 the RING\_RETENTION\_VOLTAGE. But Mr. Chu did not show  
05:06 21 Dr. Sylvester the whole document.

05:06 22 And if you look at the whole document, you can see the  
05:06 23 right-hand side, it refers to read and write information. It's  
05:06 24 not referring to retention. It's referring to reading and  
05:06 25 writing to memory, which is a different thing than retention.

05:06 1 This is a good example of how when you look at the full  
05:06 2 document, you see the full truth, the theory collapses.

05:06 3 But it's more than that. Dr. Conte didn't even refer to  
05:06 4 this Vmin in his original testimony when he was explaining his  
05:06 5 infringement theory. It was something that was mentioned for  
05:06 6 the first time by Mr. Chu in cross-examining Dr. Sylvester.

05:07 7 And not even that. If this was significant, again, they  
05:07 8 would have asked Mr. Douglas about it. They didn't ask him a  
05:07 9 single question about it. They had the -- one of the lead  
05:07 10 architects for the chips sitting there on the witness stand,  
05:07 11 didn't ask one question about it. It's a sideshow. It's not  
05:07 12 relevant.

05:07 13 Now, Dr. Sylvester said:

05:07 14 "Does this chart have anything to do with  
05:07 15 RING\_RETENTION\_VOLTAGE?

05:07 16 "No.

05:07 17 "Does it have anything to do with what Dr. Conte  
05:07 18 identified as the minimum operating voltage for his  
05:07 19 infringement analysis?

05:07 20 "No. It doesn't."

05:07 21 And that's the truth.

05:07 22 So for all these reasons the RING\_RETENTION\_VOLTAGE is not  
05:07 23 the minimum operating voltage of the memory, and that alone is  
05:07 24 reason to stop there. There's no infringement.

05:07 25 But we can see there's further problems. There's no

05:07 1 regulated voltage that triggers a switch between the power  
05:07 2 supplies. That is to say the minimum operating voltage is not  
05:07 3 used to make the decision to switch between these two. Instead  
05:07 4 it's something called the Package C7 sleep state. When it goes  
05:08 5 into that state, the switch is flipped. It has nothing to do  
05:08 6 with the minimum operating voltage.

05:08 7 And that's a second problem.

05:08 8 The third problem is the claim requires that both of these  
05:08 9 power supplies supply power-regulated voltages simultaneously.  
05:08 10 And Mr. Douglas explained to you that doesn't happen.

05:08 11 When the switch is flipped from the VCCR to the VCCIO, the  
05:08 12 VCCR no longer supplies a regulated voltage in that scenario.  
05:08 13 It's not supplying a stable supply of electricity to the  
05:08 14 components in the ring domain, and they're no long operable.

05:08 15 So that's a third reason why there's no infringement of  
05:08 16 the '373 patent.

05:08 17 If you put all these reasons together, you can see the  
05:08 18 long series of Xs. All we need is one to show noninfringement,  
05:08 19 but there's actually many. It's a completely different  
05:08 20 architecture that neither literally or equivalently infringes  
05:08 21 the patent.

05:08 22 And to sum up, the claim requires storing the minimum  
05:09 23 operating voltage. The RING\_RETENTION\_VOLTAGE is not the  
05:09 24 minimum operating voltage. Claims require using the minimum  
05:09 25 operating voltage for voltage selection. The architecture of

05:09 1 Mr. Douglas and his colleagues uses Package C7 sleep state  
05:09 2 instructions instead. And the architecture of the '373 patent  
05:09 3 requires supplying two regulated voltages at the same time, and  
05:09 4 that just doesn't happen in the Intel chips.

05:09 5 So let's go to the second patent, and this is a really a  
05:09 6 tale of two time periods. First, we're in the early 2000s.  
05:09 7 Yonah, it is undisputed, came before the '759 patent was  
05:09 8 invented. And that was back in the early 2000s.

05:09 9 And you've see the Yonah architecture. You know it was  
05:09 10 the very first Intel chip to have two core processors. And it  
05:09 11 was developed by Dr. Rotem and his colleagues.

05:09 12 This had several key characteristics. It used explicit  
05:09 13 requests to change clock frequencies. It had a programmable  
05:10 14 clock controller. It used the same frequency for all  
05:10 15 components. And the operating system ran on the core. That  
05:10 16 was how Yonah worked as Dr. Rotem explained to you.

05:10 17 Now, the only real issue here is did Yonah include a  
05:10 18 programmable clock controller?

05:10 19 And this is another one of those examples where Dr. Rotem  
05:10 20 was asked about two lines of deposition testimony, and then we  
05:10 21 came back and showed him the whole transcript. And he  
05:10 22 explained that it did have a programmable clock controller. It  
05:10 23 was a mixture of hardware and software. It didn't have a  
05:10 24 hardware-only controller, as he testified, but it had a mix of  
05:10 25 hardware and software that together constituted the

05:10 1 programmable clock controller.

05:10 2 That was the same issue that came up with Dr. Grunwald,  
05:10 3 and he said the same thing. It had a programmable clock  
05:10 4 controller. It didn't have a hardware-only clock controller.  
05:10 5 And that's really the only way in which they've tried to  
05:10 6 dispute that Yonah is different from the patent.

05:10 7 Yonah was not in front of the Patent Office. At one point  
05:11 8 there was -- during Mr. Chu's cross-examination of  
05:11 9 Dr. Grunwald, he suggested that the Patent Office had in front  
05:11 10 of it SpeedStep, which was a clock-control technology. But as  
05:11 11 you learned this morning, the type of SpeedStep technology was  
05:11 12 for the Pentium III chip. That was one core, a single core.  
05:11 13 Yonah had two.

05:11 14 It was the first two-core processor. Why does that  
05:11 15 matter? It matters because the '759 patent requires two master  
05:11 16 devices. Yonah had it, one, two. And the Patent Office didn't  
05:11 17 know about that. If the Patent Office had known about Yonah,  
05:11 18 we believe the patent would not have issued. As Dr. Grunwald  
05:11 19 said, the Patent Office did not consider Yonah when deciding to  
05:11 20 grant this patent.

05:11 21 And if you look at each part of the claims, and we  
05:11 22 encourage you to look at each and every portion of the claims  
05:11 23 at issue, you will find that Yonah had all of them. And  
05:11 24 therefore these claims are invalid.

05:11 25 So to sum up, Yonah had requests. It provided a single

05:12 1 clock frequency to all of the different components. It had the  
05:12 2 one clock. It had a programmable clock controller, and the  
05:12 3 core master devices provide the request.

05:12 4 Well, now let's fast forward 11 years, to 2015, and talk  
05:12 5 about a very different architecture in the Lake series  
05:12 6 processors.

05:12 7 You heard about this from Dr. Rotem again. He was  
05:12 8 involved in both the early 2000s work and the work in the  
05:12 9 mid-2010s, and Mr. Borkowski, who was involved in implementing  
05:12 10 some of the architectural designs of this clock control  
05:12 11 architecture.

05:12 12 Dr. Rotem actually created a Ph.D. dissertation on some of  
05:12 13 the ideas that ultimately went into the Lake series processors,  
05:12 14 and he received a Ph.D. So he wrote this long paper describing  
05:12 15 his ideas, received a Ph.D. based on those ideas in recognition  
05:13 16 for the quality of his work.

05:13 17 He also presented that work at the Institute of Electrical  
05:13 18 and Electronics Engineers, a prestigious organization. He  
05:13 19 wrote a paper. It was accepted for publication in an IEEE  
05:13 20 journal.

05:13 21 Now, at that time IEEE learned of his work. Did anyone  
05:13 22 say to him -- was there any evidence to you that someone said  
05:13 23 to him, hey, didn't you know that was in a patent I filed many  
05:13 24 years ago?

05:13 25 No one said that.

05:13 1 This was recognized as a new approach, which Dr. Rotem and  
05:13 2 his colleagues believed was revolutionary. That document that  
05:13 3 you've seen from VLSI a few times that uses the word  
05:13 4 "revolutionary," that's referring to his idea, Dr. Rotem's  
05:13 5 idea, the work of he and his colleagues. They were proud of  
05:13 6 it. They were proud of the work that they had done, and they  
05:13 7 presented it publicly to IEEE.

05:13 8 And you can see it right here in this board. It took  
05:13 9 multiple clocks, independent clocks, no requests. Instead  
05:14 10 there's autonomous control. It's a much more sophisticated  
05:14 11 structure than the Yonah structure from 11 years before. This  
05:14 12 allows for calibrating the frequency of different components  
05:14 13 using independent clocks.

05:14 14 If the graphics processor is particularly busy, you  
05:14 15 increase the frequency of the clock for the graphics processor  
05:14 16 and so on. Different clocks for different components. It's a  
05:14 17 very high power -- very powerful and efficient approach that  
05:14 18 reflects the hard work of Dr. Rotem and his colleagues. And  
05:14 19 it's quite different from the '759 claims.

05:14 20 No. 1, the claims require that a request be made from  
05:14 21 master devices, like the cores, for a change in clock  
05:14 22 frequency. And as you've learned, that's just not how it  
05:14 23 works.

05:14 24 As Dr. Rotem explained, what triggers those components to  
05:14 25 provide information, "components" meaning the cores, including

05:14 1 something you learned about called the C0 residency  
05:14 2 information, what triggers them to provide this information to  
05:15 3 the PCU? Nothing. It goes all the time, even when the cores  
05:15 4 are asleep. No request? No request.

05:15 5 As you heard, it's like a train. It arrives on a regular  
05:15 6 schedule to the PCU. It's a set of data. There's actually  
05:15 7 many portions of data called telemetry information that goes to  
05:15 8 the PCU. The PCU conducts complicated analyses of it, then the  
05:15 9 PCU decides what to do.

05:15 10 So instead of the old system where the core would make a  
05:15 11 request to change the clock, in this system the cores transmit  
05:15 12 information to the PCU. The PCU is the brain that does the  
05:15 13 analysis, and the PCU decides when to change the different  
05:15 14 clocks. Completely different, much more advanced architecture  
05:15 15 than the '759 patent, which was nearly a decade before it.

05:15 16 Dr. Conte confirmed that -- just as he said here:

05:15 17 "Isn't it true that you also testified in the same  
05:15 18 deposition that periodic reading of information is not a  
05:15 19 request?

05:15 20 "Yes.

05:16 21 "All right. So you described the accused feature as  
05:16 22 periodic, correct?

05:16 23 "Yes.

05:16 24 "And you said on the very next page that a periodic  
05:16 25 push-out of information is not a request, correct?

05:16 1 "That's correct."

05:16 2 Periodic push-out of information to the PCU is not a  
05:16 3 request. Despite Mr. Chu's best attempts to use restaurant  
05:16 4 analogies to turn it into a request, it's just not. It's not a  
05:16 5 request. It's the transmission of information to the PCU. The  
05:16 6 PCU does the analysis. The PCU makes the decisions. There's  
05:16 7 no request.

05:16 8 And that's the first independent reason why none of the  
05:16 9 claims are infringed.

05:16 10 Second, if you look at the claim language, and we  
05:16 11 encourage you to read it precisely, every word, it talks about  
05:16 12 providing a request to change a clock frequency of a high-speed  
05:16 13 clock. And then a little bit lower, providing the clock  
05:16 14 frequency of the high-speed clock to a second master device,  
05:16 15 and then a little bit later, providing the clock frequency of  
05:16 16 the high-speed clock.

05:17 17 So we have a request for a clock frequency of a high-speed  
05:17 18 clock, and then we have cross-references to the, the clock  
05:17 19 frequency of the high-speed clock. It's referring to a single  
05:17 20 clock frequency in the claim.

05:17 21 We're not trying to rewrite it. We're trying to read this  
05:17 22 precisely as it's written word for word.

05:17 23 And if you look at that type of architecture, Yonah had it  
05:17 24 first. They had a single clock.

05:17 25 The Lake series processors have nothing like that.

05:17 1 Multiple clocks independent for different components, and  
05:17 2 that's the second reason why there's no infringement. As  
05:17 3 Dr. Rotem confirmed, different clocks, different speeds.

05:17 4 And you saw Dr. Grunwald show you exactly what that meant.  
05:17 5 '759, you move the speeds in lockstep. In the Intel  
05:17 6 architecture developed by Dr. Rotem, Mr. Borkowski and their  
05:17 7 colleagues, there's independent clock control of the different  
05:17 8 components.

05:17 9 That's the second reason why the '759 claims are not  
05:18 10 infringed.

05:18 11 Put them all together and, again, you have many reasons  
05:18 12 why these claims are not infringed. We only need one, but  
05:18 13 there's many. It's just a very fundamentally different  
05:18 14 architecture. It's much more advanced than the nearly decade  
05:18 15 old '759 patent.

05:18 16 So to sum up, the '759 patent requires requests. The Lake  
05:18 17 series processors of the 2015 and onward time period don't have  
05:18 18 them. The '759 patent requires providing the clock frequency  
05:18 19 of the high-speed clock, the clock frequency. The Intel  
05:18 20 products don't do that. They use multiple independent clocks.

05:18 21 So, again, it's a tale of two time periods. In the early  
05:18 22 2000s, Yonah came first. Yonah had all of these ideas before  
05:18 23 the '759 patent was even filed. And you can't file a patent on  
05:18 24 ideas that somebody else already came up with.

05:18 25 And if you fast forward 11 years, the Lake series

05:18 1 processors use a far more advanced architecture that is  
05:18 2 different in kind from anything like the '759 patent.

05:18 3 Now, the amount of money owed by Intel is zero. There's  
05:19 4 no infringement of these patents, and the '759 patent is  
05:19 5 invalid. But we've examined the damages case here for a couple  
05:19 6 of reasons, most importantly to show you the character of this  
05:19 7 case and what it's really about. And Mr. Lee's going to come  
05:19 8 back to that in a bit.

05:19 9 But you also heard from Mr. Huston this morning about what  
05:19 10 a real hypothetical negotiation would look like based on his  
05:19 11 experience over 20 years licensing hundreds of agreements at  
05:19 12 IBM. And he showed you what you would look at for real-world  
05:19 13 data points.

05:19 14 And, Your Honor, I just ask that the public monitors be  
05:19 15 turned off for just a minute.

05:19 16 He showed you comparable agreements, which His Honor's  
05:19 17 jury instructions have instructed you are significant for this  
05:19 18 type of analysis, and it makes just good sense.

05:19 19 If you were buying a house, you'd look for comparable  
05:19 20 house prices. If you were buying a car, you'd look for  
05:19 21 comparable car prices. It just makes good economic sense to  
05:19 22 look at what other prices have been for similar technology.  
05:19 23 Mr. Huston took you through many different forms of such  
05:20 24 comparable agreements.

05:20 25 Now, he couldn't show you an agreement in which VLSI had

05:20 1 licensed these patents to somebody else because they haven't  
05:20 2 done it. No one's paid a penny for these patents or taken a  
05:20 3 license from VLSI for them.

05:20 4 So instead he took you through data after data after data,  
05:20 5 including sales agreements for the patents themselves. He took  
05:20 6 you through comparable agreements between Intel and these  
05:20 7 companies that own them. He took you through offers made from  
05:20 8 those companies to Intel. He took you through 18 different  
05:20 9 comparable agreements that Intel had executed with a variety of  
05:20 10 parties, and he showed you what all of this data suggested.

05:20 11 And, Your Honor, we can go back on the public record.

05:20 12 THE COURT: Thank you, sir.

05:20 13 MR. MUELLER: Based on all of this, he suggested that in a  
05:20 14 hypothetical negotiation, the appropriate amount of money for  
05:20 15 these patents would be \$2.2 million total lump sum,  
05:20 16 one-time-only payment, based on reams of comparable agreements.

05:20 17 Mr. Chandler, who took the stand this morning, was called  
05:21 18 to rebut him. He looked at hundreds of agreements and couldn't  
05:21 19 find one, not one, that he considered comparable. And there's  
05:21 20 a good reason for that. What they're seeking in this case is  
05:21 21 literally billions of dollars for two patents. He couldn't  
05:21 22 find one agreement that would be comparable to that demand. It  
05:21 23 just doesn't exist.

05:21 24 No one has ever paid anything remotely like the type of  
05:21 25 money that VLSI is seeking for these two patents in the real

05:21 1 world. And as you heard from Mr. Huston, if he'd been at the  
05:21 2 negotiating table when someone made that sort of demand, he  
05:21 3 would have said no and walked away quickly.

05:21 4 It's an outrageous demand and really it tells you a lot  
05:21 5 about the character of the case, as Mr. Lee's going to come  
05:21 6 back to in just a bit.

05:21 7 To sum up, at the beginning of this case we told you we  
05:21 8 would show you that Intel has never used the '373 patent, and  
05:21 9 we have showed you exactly that. The Broadwell and Haswell  
05:21 10 processors have multiple different differences -- are different  
05:22 11 in multiple ways is a better way to put it from the claims of  
05:22 12 the '373 patent. There's no infringement.

05:22 13 We also told you that we would show you that Intel came up  
05:22 14 with the ideas in the '759 patent first before that patent was  
05:22 15 filed. We showed you that too. Dr. Rotem explained to you how  
05:22 16 the Yonah product worked and how it had all of the ideas of the  
05:22 17 '759 patent before the '759 patent. The Patent Office didn't  
05:22 18 have Yonah. If it had, the patent wouldn't have issued.

05:22 19 And finally Intel kept innovating. 11 years later, the  
05:22 20 Lake series processors used a completely different  
05:22 21 architecture. Those are what's accused of infringement, but  
05:22 22 there is no infringement. Those are fundamentally different  
05:22 23 products.

05:22 24 At the end of the evidence, if you look at all of the  
05:22 25 facts that you've seen, the truth and the whole truth, you can

05:22 1 see that these are not heros, these are not stars and these are  
05:22 2 not infringed.

05:22 3 And that just leaves one question, why are we here? And  
05:23 4 I'm going to turn it over to Mr. Lee to answer that question.

05:23 5 MR. LEE: Your Honor, ladies and gentlemen of the jury,  
05:23 6 let me join Mr. Chu and Mr. Mueller in thanking you, thanking  
05:23 7 the courtroom staff, all the judge's -- the people who work in  
05:23 8 the judge's chambers for spending your last week with us. We  
05:23 9 greatly appreciate it. You are doing an important public  
05:23 10 service.

05:23 11 But let me go to the question that Mr. Mueller asked. If  
05:23 12 everything that you now heard is true, why are we here?

05:23 13 Well, we would suggest to you that we know why Intel is  
05:24 14 here. As Mr. King told you, Intel is here to defend the work  
05:24 15 of its engineers. We know that the engineers took the stand.  
05:24 16 They walked right by you. They took the oath. They underwent  
05:24 17 cross-examination, and they did the best to describe to you all  
05:24 18 of the blood, sweat and tears that went into designing Intel's  
05:24 19 products, including the accused features.

05:24 20 Now, there's been a suggestion today that you should  
05:24 21 discount that testimony because they work for Intel. Well,  
05:24 22 each of you work for folks too. And if you were called to  
05:24 23 court and you raised your hand and you swore an oath to tell  
05:24 24 the truth, I'm sure that each of you would tell the truth. You  
05:24 25 wouldn't lie just because it was your employer.

05:24 1 Sit back and think about what you saw from Dr. Rotem,  
05:24 2 Mr. Borkowski, Mr. Douglas. Think about the cross-examination.  
05:24 3 Ask yourself whether you can dismiss the testimony the way that  
05:25 4 Mr. Chu asked you to.

05:25 5 The reason he's trying to dismiss it is because that  
05:25 6 testimony unequivocally demonstrates that we don't infringe.  
05:25 7 That's why we are here.

05:25 8 We're here for another reason. Mr. Chu suggested that it  
05:25 9 was an excuse that we didn't know about the patents, that we  
05:25 10 didn't copy the products. He forgot to tell you that they're  
05:25 11 accusing us of willfully infringing these patents. And you  
05:25 12 heard His Honor's instructions on willful infringement and  
05:25 13 what's required. Well, you now know that the Intel engineers  
05:25 14 who designed the products did it without knowledge of either  
05:25 15 patent.

05:25 16 I told you in my opening statement that there would not be  
05:25 17 a shred of evidence that the Intel folks who designed these  
05:25 18 products had heard about these patents, had copied these  
05:25 19 patents or did anything other than their own independent work.  
05:25 20 That is relevant directly to this claim that we willfully  
05:25 21 infringed, and we don't.

05:26 22 As His Honor has told you on several occasions, this case  
05:26 23 is important. It is important to Intel for sure. It's  
05:26 24 important to VLSI, but it's important to real people like  
05:26 25 Mr. Borkowski, Dr. Rotem, Mr. Douglas, who actually did the

05:26 1 work to bring these products to market. And they are here  
05:26 2 because when their work is attacked, they defend it. And  
05:26 3 they're here because when there are unreasonable litigation  
05:26 4 claims in a lawsuit in a federal court seeking unreasonable  
05:26 5 damages, it's bad for innovation. It's bad for the economy,  
05:26 6 and it's bad for the patent system.

05:26 7 But you don't have to take my word for it. Look at what  
05:26 8 Dr. Sullivan said. He said on cross-examination that when  
05:26 9 damages are objectively unreasonable, it harms the economy and  
05:27 10 it harms the patent system.

05:27 11 To be clear, as Mr. Mueller says, we believe the correct  
05:27 12 number is zero.

05:27 13 But the amount that VLSI has asked you to write down this  
05:27 14 afternoon is not objectively reasonable. It does not promote  
05:27 15 innovation as I just suggested to you. Instead it would tax  
05:27 16 the true inventors, the true innovators, the people who  
05:27 17 designed the products that came to market and have changed the  
05:27 18 lives, changed all of our lives, and the manner in which we  
05:27 19 enjoy many aspects of technology.

05:27 20 Now, why is VLSI here? That's a harder question to ask.  
05:27 21 And this is where you have to bring your common sense and  
05:27 22 collective wisdom to bear, to think about what you've seen in  
05:27 23 the last week.

05:27 24 No one from VLSI walked by you, took the oath and got on  
05:27 25 the stand. Not the CEO, Mr. Stolarski, who was introduced to

05:28 1 you on the first day of jury selection and who hasn't been here  
05:28 2 since. Not Cindy Simpson, who is the chief technology officer,  
05:28 3 who just lives up in Austin. No one from VLSI came.

05:28 4       What you know about VLSI is what we elicited on  
05:28 5 cross-examination. They don't do any research and development.  
05:28 6 They don't make any products. They don't invest in research  
05:28 7 and development. They don't make any sales. They don't  
05:28 8 generate any revenues. They have done only one thing in their  
05:28 9 four and a half years in existence, just one thing. They have  
05:28 10 acquired patents and sued Intel without ever giving Intel  
05:28 11 notice.

05:28 12       They never picked up the phone and said, we've got these  
05:28 13 two stars. We've had them on the shelf for ten years. You're  
05:28 14 using them. Come to the table and negotiate with us.

05:28 15       No. They acquired them, and three months later they sued.

05:29 16       Now, VLSI has suggested to you that the only way to  
05:29 17 evaluate the importance of their patents, the only way to  
05:29 18 evaluate Intel's infringement is to have access to Intel's  
05:29 19 confidential information. Well, that's not true. It's not  
05:29 20 true for two reasons.

05:29 21       VLSI sued Intel and brought us to this federal court  
05:29 22 without any access to our information. They accused us of  
05:29 23 infringing without ever having seen a shred of confidential  
05:29 24 information. And in the real world, people are negotiating  
05:29 25 licenses every day without access to the other parties'

05:29 1 confidential information. That is the way our economy works.

05:29 2 Now, again, let's look at the issue of credibility and  
05:29 3 what was promised to you in opening.

05:29 4 VLSI said it teamed up with NXP, but consider what you  
05:29 5 learned. Mr. Spehar, the vice president of research and  
05:30 6 development of NXP, met the CEO, met the CEO of VLSI that  
05:30 7 morning in court. The only other witness from NXP was  
05:30 8 Mr. Bearden, one of the named inventors. He had never even  
05:30 9 heard of VLSI before this litigation.

05:30 10 Now, in his opening Mr. Chu showed you this cycle of  
05:30 11 innovation, and he showed it to you again today. I want to  
05:30 12 walk through it very quickly once again. Because again, it  
05:30 13 goes to the arguments the parties have made to you and whether  
05:30 14 those arguments can be credited and justify enormous -- the  
05:30 15 enormous amount that VLSI is claiming.

05:30 16 What you actually know is NXP did not invent either the  
05:30 17 '373 or the '759 patent. They were actually patents acquired  
05:30 18 from SigmaTel and Freescale. You know that the Patent Office  
05:30 19 didn't grant these patents to NXP or VLSI. In fact, you now  
05:31 20 know that VLSI has never applied for a patent.

05:31 21 Third, you know that VLSI has never licensed any patents.  
05:31 22 Not the '373, not the '759, not any.

05:31 23 And fourth, you now know that not a single dollar has gone  
05:31 24 from VLSI to NXP.

05:31 25 All you need to know about the cycle of innovation is it

05:31 1 hasn't happened. Now, some of the witnesses have tried to  
05:31 2 suggest to you that, well, if VLSI recovers, if it convinces  
05:31 3 you to give them something, NXP will get a share.

05:31 4 Well, all we know about that is it's less than half, and  
05:31 5 we know that others, Mr. Stolarski and some others who we don't  
05:31 6 know, get the rest.

05:31 7 But the -- in the end, the question for you is not who  
05:31 8 gets money because we say none should be awarded, but it is who  
05:32 9 is the real innovator based upon what you've heard? Who has  
05:32 10 the real innovation cycle? And the answer is it's Intel.

05:32 11 These are not made-up photos. These are photos of what  
05:32 12 Intel has actually done. It starts with its scientists  
05:32 13 innovating and inventing. That results in thousands of  
05:32 14 patents, as you've heard. That results in manufacturing,  
05:32 15 including manufacturing billions of products in the United  
05:32 16 States that are then sold as real-world products, that generate  
05:32 17 money. It's invested in research and development, and the  
05:32 18 cycle starts again.

05:32 19 That is a real innovation cycle.

05:32 20 Now, Intel does sell billions of microprocessors. Those  
05:32 21 billions of microprocessors come from this innovation cycle.  
05:32 22 Intel is proud that it does. But to be clear, those sales of  
05:32 23 billions of dollars of processors also make Intel a target when  
05:33 24 someone wants to take two patents off the shelf that haven't  
05:33 25 been used for ten years and say, we'd like \$2 billion. If you

05:33 1 have been successful as a result of your own innovation cycle,  
05:33 2 if you have been, you'll be a target, and that's what's  
05:33 3 occurred here.

05:33 4 Now, let me provide you a couple of observations on the  
05:33 5 evidence that Mr. Mueller has described to you.

05:33 6 As he said, we have tried to bring you the factual  
05:33 7 witnesses, the people who actually did the work, who could  
05:33 8 explain to you what they did, why they did it and what the  
05:33 9 results were. We wanted you to understand the facts.

05:33 10 What did VLSI do? VLSI has concentrated its closing on  
05:33 11 its experts. VLSI invested more than a million dollars in  
05:33 12 these experts. Dr. Annavaram was paid hundreds of thousands of  
05:34 13 dollars. Dr. Conte, \$180,000. Dr. Sullivan, more than  
05:34 14 \$500,000. Dr. Chandler, several hundred thousands of dollars.

05:34 15 Now, these are not independent experts who are coming to  
05:34 16 give you a dispassionate opinion. These are people who got  
05:34 17 hired to do something and in some cases viewed themselves as  
05:34 18 advocates.

05:34 19 But let's look at what the results were of this  
05:34 20 investment. This is where VLSI has invested its money. Not in  
05:34 21 research and development, not in anything else, but in this  
05:34 22 litigation.

05:34 23 Only one person on the face of the earth has ever  
05:34 24 suggested that Intel infringes these patents. Only one.  
05:34 25 Dr. Conte. He disagrees with Dr. Sylvester. He disagrees with

05:34 1 Dr. Grunwald. He disagrees with Dr. Rotem, Mr. Borkowski and  
05:34 2 Mr. Douglas.

05:35 3 Now, Mr. Mueller showed you these slides which summarizes  
05:35 4 why Intel doesn't infringe. For each of these key claim  
05:35 5 limitations, Dr. Conte disagreed not just with the experts on  
05:35 6 the other side, Dr. Sylvester and Dr. Grunwald, but with the  
05:35 7 factual witnesses. The people who -- and I ask you to go back  
05:35 8 in your own memories and think about the time when they  
05:35 9 testified, think about the cross-examination.

05:35 10 Dr. Conte disagreed with Mr. Douglas about whether there  
05:35 11 was a minimum operating voltage for C6 SRAM. Dr. Conte  
05:35 12 disagreed with Mr. Douglas about RING\_RETENTION\_VOLTAGE and  
05:35 13 whether it was a minimum.

05:35 14 Dr. Conte disagreed with Mr. Douglas on whether the VCCR  
05:35 15 provides a regulated voltage during the ramp. And Dr. Conte  
05:35 16 disagreed with Dr. Rotem, who actually came up with the  
05:36 17 revolutionary idea of Speed Shift, on the question of whether  
05:36 18 there were requests.

05:36 19 The one person, the only person who's ever said Intel  
05:36 20 infringes, Dr. Conte disagrees with every factual witness who  
05:36 21 came, two experts, and with the documents.

05:36 22 And as he admitted on cross-examination, a court of  
05:36 23 appeals has said that Dr. Conte, in a prior case, jumped to  
05:36 24 conclusions that no reasonable jury could credit. That's what  
05:36 25 happened here. He jumped to conclusions that are inconsistent

05:36 1 with the facts as you've heard them.

05:36 2 Now, these disagreements matter. They matter because they  
05:36 3 have the burden of proving infringement. They have the burden  
05:36 4 of showing entitlement to this enormous amount of money, and  
05:36 5 they have the burden of showing you that each and every  
05:37 6 limitation is present. And even if one is missing, there's no  
05:37 7 infringement.

05:37 8 But the best example that there was an investment in  
05:37 9 litigation, not research and development, is Dr. Sullivan.

05:37 10 I'm going to spend a few minutes now, just a few, on  
05:37 11 Dr. Sullivan's model because this is what they paid \$500,000  
05:37 12 for.

05:37 13 At the same time that Intel was investing in the next  
05:37 14 generation of microprocessor, the next one with the smaller  
05:37 15 line was, this is what they were investing in.

05:37 16 Now, Dr. Sullivan suggested to you that whether patent  
05:37 17 owners ever made use of products themselves was not relevant.  
05:37 18 But you now know, having heard His Honor's instructions today,  
05:37 19 that's simply not correct. What he told you was correct is  
05:37 20 incorrect.

05:37 21 And when you go back and look at the Georgia-Pacific  
05:38 22 factors, you remember when His Honor said, "This is the  
05:38 23 instruction I don't like reading," that's the one.

05:38 24 If you read that instruction, you will see that what the  
05:38 25 patent owner did, whether the patent owner had a product,

05:38 1 whether the patent owner licensed is all relevant to the value  
05:38 2 of the patent. And that just makes common sense, as Dr. Conte  
05:38 3 conceded on cross-examination.

05:38 4 But Dr. Sullivan did. And the reason he made this  
05:38 5 argument to you is two things. He ignored the rules of the  
05:38 6 road. He ignored what His Honor has now told you should govern  
05:38 7 the question of damages. But he did it for a very simple  
05:38 8 reason. It is the only way he could -- it's the only way he  
05:38 9 could dismiss all of the real-world evidence. It's the only  
05:38 10 way he could dismiss license agreements, purchase transactions,  
05:38 11 other events. And instead he came up with this complicated  
05:39 12 damages model.

05:39 13 And if I could put on the screen the complicated damages  
05:39 14 model, I think, Your Honor, if we could just blank the public  
05:39 15 screen.

05:39 16 THE COURT: Yes, sir.

05:39 17 MR. LEE: This is his six-part model. This is how he gets  
05:39 18 to his big number. And all you need to know is that if any one  
05:39 19 of these is wrong, the number is wrong.

05:39 20 And the second thing that you need to know is that there  
05:39 21 were problems at every turn, and every single problem resulted  
05:39 22 in inflating the number.

05:39 23 So what do I mean by that? Well, first, Dr. Conte relied  
05:39 24 on -- Dr. Sullivan relied upon Dr. Conte who relied upon  
05:39 25 Dr. Sullivan -- on Dr. Annavaram. But as you know, if I start

05:39 1 at the upper left-hand corner, Dr. Annavaram had some  
05:40 2 limitations, I guess is the best way to put it, on his testing.

05:40 3 He tested some products that were not even accused of  
05:40 4 infringement. He measured the wrong features within those  
05:40 5 products. And these mistakes all led him to overstating and  
05:40 6 inflating his number. But that wasn't the only problem.

05:40 7 We can blank the screen, Mr. Lee.

05:40 8 That wasn't the only problem. He relied upon Dr. Conte  
05:40 9 for this one-to-one relationship. Do you remember the  
05:40 10 one-to-one relationship? Except that the people who are  
05:40 11 actually out there doing the work, Mr. Douglas, Dr. Rotem, they  
05:40 12 said that one-to-one relationship isn't a relationship. It's  
05:40 13 much more complicated than that, and it depends upon what  
05:40 14 you're doing. It depends upon what your use is.

05:40 15 And then Dr. Sullivan put everything into his regression.  
05:41 16 But as we heard from Mr. Huston and even Dr. Sullivan himself,  
05:41 17 this hedonic regression which I mentioned to you in opening has  
05:41 18 never been used in the real world to value a patent.

05:41 19 And if, Mr. Lee, if I could have DDX-20.103 on the screen.

05:41 20 Here are the people who have used hedonic regression to  
05:41 21 value a patent, and here are the people who haven't. And yes.  
05:41 22 Did we ask every single person who did? Of course, because  
05:41 23 without the hedonic regression, there is no damages claim.

05:41 24 At each one of these places, Dr. Annavaram's limited  
05:41 25 testing, Dr. Conte's assumption about ratios, the use of

05:41 1 hedonic regression that hasn't been used in any other context,  
05:41 2 in every step decisions were made that resulted in inflating  
05:42 3 the number.

05:42 4 And that, at the end of the day, is what resulted in a  
05:42 5 damages claim for a hypothetical license that has no tie to  
05:42 6 anything else that has ever occurred in the real world. It  
05:42 7 results in a number that -- if I could have 106, Mr. Lee --  
05:42 8 Dr. Sullivan himself describes as astronomical.

05:42 9 Now, I think VLSI is suggesting that, well, you didn't do  
05:42 10 your own testing. That argument really misses the mark for  
05:42 11 three reasons.

05:42 12 First, the models were wrong. The assumptions were wrong.  
05:42 13 The data was wrong. There was no reason for us to take the  
05:42 14 wrong models, the wrong data, the wrong assumptions and try to  
05:42 15 run them again to get to the wrong result. It would make no  
05:42 16 sense to do that.

05:42 17 Second, and this is critically important, the testing was  
05:43 18 a testing of what Intel's products do, not what the patents do.  
05:43 19 Have you seen a single test from Freescale -- from SigmaTel,  
05:43 20 Freescale or NXP that shows the benefits of the patents? No.  
05:43 21 All you've seen is testing that shows the benefits, according  
05:43 22 to them, of what Intel's products do.

05:43 23 And, third, that is the reason why there is no  
05:43 24 relationship between what happened in the real world and this  
05:43 25 number that Dr. Sullivan has given to you. It's the reason

05:43 1 that Mr. Chandler, the last witness who got on the stand and  
05:43 2 who has years licensing, was not asked to give you a reasonable  
05:43 3 royalty opinion because he couldn't give you one that would be  
05:43 4 even in the same universe as what Dr. Sullivan came up with.

05:44 5 Now, as I mentioned in my opening, I've been trying cases  
05:44 6 for 45 years. I've learned that in a trial like this, if the  
05:44 7 facts support you, you show up. You have witnesses get on the  
05:44 8 stand. They take the oath. You defend yourself, and you stay  
05:44 9 till the very end.

05:44 10 I've also learned that if you make a serious accusation  
05:44 11 and you're asking for lots of money, you stand up and you prove  
05:44 12 it.

05:44 13 No one from VLSI has come here. Not a single person.  
05:44 14 They're asking you for billions of dollars and no one even  
05:44 15 bothered to come. No one took the oath. No one underwent  
05:44 16 cross-examination. No one let us ask them, what do you do?  
05:44 17 How do you do it? What do you invest in? Where's the money  
05:44 18 going? Where's it coming from?

05:44 19 But you know who did get on the stand? You know who did  
05:44 20 show up? The Intel engineers. The Intel engineers came here,  
05:45 21 got on the stand, testified in cross-examination. They weren't  
05:45 22 afraid. They didn't run from the task. They didn't lie. Just  
05:45 23 as every single one of you would, they stood up for their work.

05:45 24 And I'd like to ask them, to remind you, to stand up just  
05:45 25 once more so you can be reminded that they stayed here till the

05:45 1 end with you. In a courtroom where VLSI hasn't been here since  
05:45 2 jury selection, hasn't got on the stand, these folks stayed  
05:45 3 till the end.

05:45 4 And they stayed here till the end because they told you  
05:45 5 the truth. Because the attack on their credibility is a  
05:45 6 fabrication, and because they are the people who have designed  
05:45 7 and built and brought to market the products that you are using  
05:45 8 every day.

05:45 9 When you go back to the jury room, we ask you to find just  
05:46 10 what Mr. Mueller said. I said at the outset, it seems like a  
05:46 11 long time ago, I know you feel like you've been drinking  
05:46 12 technology from a firehose, but I said the case was actually  
05:46 13 straightforward. We've never used the '373 patent.

05:46 14 For the '759 patent, we actually did it first. There is  
05:46 15 no dispute about that. As you heard today, everybody concedes  
05:46 16 we did it first. Ten years later, we did something different  
05:46 17 Speed Shift, and it doesn't infringe.

05:46 18 Ladies and gentlemen, this is our last chance to address  
05:46 19 you. Mr. Chu gets one last chance, and we don't get a chance  
05:46 20 to come back. It's got to stop at someplace.

05:46 21 I ask you just this favor. When you go back to the jury  
05:46 22 room, if there's something Mr. Chu says that I can't respond to  
05:46 23 now, but you know, having been with us for a week, how we would  
05:46 24 respond, when that comes up, I would just ask you to raise your  
05:47 25 hand and say, yeah, VLSI said this, but I think Intel would

05:47 1 have responded this way. That is the fair way to resolve  
05:47 2 things. Intel did not bring this --

05:47 3 THE COURT: Mr. Lee. You guys, you can sit down.

05:47 4 MR. LEE: Sorry. They're here, they're standing.

05:47 5 Ladies and gentlemen, Intel did not bring this lawsuit.  
05:47 6 We're here because we had to be. We're here because we make  
05:47 7 billions of sales of microprocessors. We're here because it  
05:47 8 makes us a target. And we're here to defend ourselves.

05:47 9 I ask you just this: Return Intel to the marketplace  
05:47 10 where it can compete on innovation, invention and products  
05:47 11 rather than in the courtroom. Let Intel do what it did for the  
05:48 12 ten years when these two patents were sitting on the shelf not  
05:48 13 being used by anyone, making inventions, pursuing a real cycle  
05:48 14 of innovation.

05:48 15 If you think about this case in that context, if you bring  
05:48 16 your collective wisdom and common judgment to bear, if you  
05:48 17 think about the real credibility of witnesses, not little  
05:48 18 snippets of testimony that lawyers get after 45 minutes of  
05:48 19 forcing witnesses into yes or no answers, you'll know the  
05:48 20 correct answer. Thank you very much.

05:48 21 CLOSING ARGUMENT ON BEHALF OF THE DEFENDANT

05:48 22 MR. CHU: I want to talk about witnesses first and other  
05:49 23 evidence. And then I want to talk about the regression  
05:49 24 analysis.

05:49 25 Contrary to what Intel's counsel said, there were

05:50 1 witnesses from Intel who agreed 100 percent with Professor  
05:50 2 Conte on some key issues. I showed some of that earlier this  
05:50 3 afternoon. Some of those fact witnesses from Intel disagreed  
05:50 4 100 percent from some of the Intel expert witnesses on key  
05:50 5 facts on the prior art as well as on key facts about  
05:50 6 infringement.

05:50 7 In addition, there were key Intel documents that showed  
05:50 8 how the products operated. And despite the fact that some of  
05:50 9 the Intel expert witnesses tried to disagree with those  
05:50 10 documents, they couldn't and when confronted on  
05:50 11 cross-examination had to agree that the documents were  
05:51 12 accurate.

05:51 13 One other thing about electronic products like this, you  
05:51 14 have heard the phrase "source code" or "P-code." These are the  
05:51 15 detailed computer instructions that tell the products how to  
05:51 16 operate.

05:51 17 Dr. Conte testified extensively, he would say, here's how  
05:51 18 they operate. And frequently not any Intel employ or an expert  
05:51 19 witness on the other side said, I read that source code and it  
05:51 20 operated differently. Because he can't do that.

05:51 21 The source code prescribes exactly how the products are  
05:51 22 operating. You will remember how extensively Professor Conte  
05:51 23 would discuss the source code. So there were Intel fact  
05:52 24 witnesses who agreed and -- with Dr. Conte, and disagreed with  
05:52 25 Intel expert witnesses, and there were key documents including

05:52 1 the source code that supported Dr. Conte.

05:52 2 Next on the regression analysis. There's no dispute that  
05:52 3 it's a well-used technique. There's no dispute that some Nobel  
05:52 4 prizes have been awarded in connection with using regression  
05:52 5 analysis. There's no dispute that major corporations and  
05:52 6 government agencies use it for many different purposes.

05:52 7 It cannot be used in normal license negotiations because  
05:52 8 you need information from both sides, and normally people don't  
05:52 9 exchange that information. And you heard testimony about that  
05:53 10 from Dr. Sullivan. There was no dispute about it.

05:53 11 But he also said that there are situations in license  
05:53 12 negotiations where both sides do have the information and,  
05:53 13 therefore, they can use the regression analysis. And for  
05:53 14 dozens and dozens of clients, he has personally been involved  
05:53 15 in using the regression analysis.

05:53 16 One other part about the expert witnesses. Both sides had  
05:53 17 expert witnesses. Both sides, you heard testimony that they  
05:53 18 were paid a certain amount and the hourly rates. And if the  
05:53 19 point of opposing counsel was it's an expensive process, I  
05:53 20 guess they were trying to say it's just an expensive process  
05:53 21 one way. Both sides had numbers of expert witnesses, and there  
05:53 22 isn't much choice but to go through that particular process.

05:54 23 Now, there were comments made about Mr. Stolarski. He was  
05:54 24 required --

05:54 25 MR. LEE: Your Honor, I object to this.

05:54 1 MR. CHU: There was testimony that he was required to --

05:54 2 MR. LEE: Your Honor, I object to this. I raised this to

05:54 3 Your Honor specifically.

05:54 4 MR. CHU: I don't know what the objection was.

05:54 5 Mr. Chandler --

05:54 6 THE COURT: Mr. Lee, I don't remember you raising this.

05:54 7 MR. LEE: I raised it at the conference -- (inaudible.)

05:54 8 THE REPORTER: I can barely hear you.

05:54 9 MR. LEE: I'm sorry.

05:54 10 THE COURT: I don't recall. I do not recall us raising

05:54 11 this.

05:54 12 MR. LEE: I raised specifically the question of whether

05:54 13 there could be something said about where he was and what he's

05:54 14 been doing, where we had no idea what it was. And that's

05:54 15 exactly what's on the slide now.

05:54 16 THE COURT: Let take the slide down, Mr. Chu.

05:55 17 MR. CHU: I'm going to go forward, but I'm going to stay

05:55 18 on some of the other aspects about Mr. Stolarski.

05:55 19 THE COURT: You're welcome to.

05:55 20 MR. CHU: Yes. Counsel for Intel made it out as if he

05:55 21 wasn't willing to testify under oath. They took his deposition

05:55 22 for two full days under oath. They were able to, if they

05:55 23 wanted to, play any or all of that deposition testimony, and

05:55 24 it's considered as much weight as if he was testifying in a

05:55 25 court of law.

05:55 1 And we also know that even though he is at home, he is  
05:55 2 watching this proceeding, as many, many other people are.

05:55 3 You heard some comments about Professor Conte, and it was  
05:56 4 also brought out during the course of this trial that he had  
05:56 5 testified for USAA, which is based in San Antonio in two cases  
05:56 6 against Wells Fargo for patent infringement.

05:56 7 They're cases that were tried here in Texas, actually not  
05:56 8 too far from this particular courthouse. And all of the USAA  
05:56 9 patents were found valid and infringed, and there was a jury  
05:56 10 verdict in the hundreds of millions of dollars.

05:56 11 Let's look at some of the evidence on '759. Intel has the  
05:56 12 burden of proving patent invalidity by clear and convincing  
05:56 13 evidence.

05:56 14 The preponderance is where the scales of justice are very  
05:56 15 closely, evenly balanced. If it tilts slightly in favor of the  
05:56 16 party with the burden by the preponderance, then you can  
05:56 17 rightfully find for that person. That is the burden of proof  
05:57 18 on VLSI to prove infringement.

05:57 19 A peppercorn more of weight is sufficient. That's very  
05:57 20 different from a criminal case.

05:57 21 To prove invalidity, it must be by clear and convincing  
05:57 22 evidence, so clear, direct, weighty and convincing as to enable  
05:57 23 you to come to a clear conviction without hesitancy that the  
05:57 24 patent is invalid.

05:57 25 Also as a part of the law there is a presumption of

05:57 1 validity. A patent is presumed valid and one of the flaws of  
05:57 2 one of the experts presented by Intel is the following.  
05:57 3 Dr. Grunwald was asked today, "You did not presume validity or  
05:57 4 invalidity of the '759 patent when you were working on your  
05:57 5 expert report," and he said, "I don't think I can answer that,"  
05:57 6 which was a common place that he hid when he didn't want to  
05:58 7 answer a question.

05:58 8 The Patent Office knew about Yonah's SpeedStep technology.  
05:58 9 The evidence was SpeedStep was before in this Pentium III and  
05:58 10 the evidence is that SpeedStep, the technology controlling the  
05:58 11 speed of the cores, was the same throughout the different  
05:58 12 product lines that use SpeedStep and it worked the same way in  
05:58 13 a one-core product, two-core product or four-core product. So  
05:58 14 the Patent Office did, in fact, have that SpeedStep technology  
05:58 15 before it.

05:58 16 The Patent Office, therefore, knew about the Yonah  
05:58 17 SpeedStep because it was the same that was in the Pentium and  
05:58 18 other products.

05:58 19 Now, here's an example. It's not as if every fact and  
05:59 20 expert witness in this case were opposed to Professor Conte.  
05:59 21 Dr. Grunwald said the Yonah processor -- was asked, the Yonah  
05:59 22 processor did not have a hardware controller on it. Would you  
05:59 23 agree with that? Yes or no.

05:59 24 He said no, very clearly.

05:59 25 And then we asked him questions about Dr. Rotem's

05:59 1 testimony. "The Yonah processor did not have a controller?"

05:59 2 Answer: "It did not have a hardware controller."

05:59 3 It goes to the credibility of the Intel defense when their  
05:59 4 hired expert disagrees with an Intel fact witness on a key  
05:59 5 point.

05:59 6 Question: "You would agree that Dr. Rotem when he was  
05:59 7 answering these questions knew more about Yonah than you? He  
05:59 8 designed it?

05:59 9 "Yes.

05:59 10 "Just to clarify, these were statements by Dr. Rotem about  
06:00 11 Yonah and you disagree with both of those statements by  
06:00 12 Dr. Rotem?"

06:00 13 Dr. Grunwald said, "Yes."

06:00 14 It's a question of credibility and you can judge it in  
06:00 15 black and white here.

06:00 16 What has a programmable controller? The evidence clearly  
06:00 17 showed, it's described in the '759 patent. It's in the Lake  
06:00 18 products and it was not in Yonah, which is why it cannot  
06:00 19 possibly invalidate the '759 patent.

06:00 20 Intel tried to make it out as if the '759 patent was old  
06:00 21 and tried to make it out as if it's as old as the old Netflix  
06:00 22 mail-you-a-movie-at-your-request.

06:00 23 But when confronted with the evidence, Dr. Grunwald had to  
06:00 24 admit that it wasn't old, given the fact that Mr. Henson's  
06:01 25 invention would permit speed changes a million times a second.

06:01 1 And he wrote that not only in the specification of the patent  
06:01 2 but in the claims of the patent itself. Claim 4 in particular.

06:01 3 The experts actually agreed on some facts, such as the  
06:01 4 '759 patent is not limited to MP3 players.

06:01 5 Here's some more evidence on the '373 patent. At first  
06:01 6 Dr. Sylvester was asked, "Did you find anything in the Intel  
06:01 7 documents that referred to minimum retention voltage for the C6  
06:01 8 SRAM?"

06:01 9 "No."

06:01 10 And then we showed him this document for both Broadwell as  
06:01 11 well as Haswell that had the Vmin. Again, these are Intel  
06:01 12 documents, not created for the purpose of litigation.

06:01 13 Voltage is used during ramp-ups and ramp-downs.

06:02 14 Dr. Sylvester testified as follows:

06:02 15 Question. "And is the VCCR supplying a reliable voltage  
06:02 16 during that ramp-down period?

06:02 17 Answer: "No."

06:02 18 But Mr. Douglas, the Intel employee was asked, Question:  
06:02 19 "Intel's ramp controller circuitry makes sure that the voltage  
06:02 20 is ramped up and down at rates especially chosen by Intel,  
06:02 21 correct?"

06:02 22 And he said, "Yes. At rates chosen by Intel."

06:02 23 Again, a direct contradiction between Dr. Sylvester and  
06:02 24 Mr. Douglas. It's a question of credibility.

06:02 25 And there is the question about damages.

06:02 1 You've heard the instruction in the evidence about the  
06:03 2 hypothetical negotiation. In the real world, no one has  
06:03 3 decided that the patents are valid and infringed, but that's  
06:03 4 what the assumption is in the hypothetical negotiation.

06:03 5 You heard evidence about other patents from Mr. Huston,  
06:03 6 but he had to admit he had zero evidence that any of those  
06:03 7 patents were used by Intel in any Intel product.

06:03 8 Well, of course the amounts paid for those licenses are  
06:03 9 very low because Intel wasn't getting any advantage or use of  
06:03 10 those patents.

06:03 11 There was other evidence about sales and mergers of the  
06:03 12 various companies that had owned the '373 and '759 patent. But  
06:03 13 they have no relationship to Intel and Intel's use, which is  
06:04 14 the touchstone for damages.

06:04 15 This is a chart that Mr. Huston on the left had shown all  
06:04 16 of these small, small licenses, but here on the right side are  
06:04 17 other Intel licenses.

06:04 18 Here's Mr. Huston agreeing that he didn't assess whether  
06:04 19 those license agreements for the small amounts involved  
06:04 20 situations where Intel actually practiced any of those  
06:04 21 inventions.

06:04 22 You did hear from Adam King, the first Intel employee, who  
06:04 23 said there are thousands of different features. And he said,  
06:04 24 "I want to tell you about one, it's called hyperthreading,"  
06:04 25 suggesting that this was technology that was created by Intel.

06:04 1       The fact is that Intel paid MicroUnity \$300 million to  
06:05 2 resolve a patent litigation of MicroUnity's hyperthreading  
06:05 3 innovations.

06:05 4       Intel also paid \$1.5 billion to Nvidia for a license to  
06:05 5 their patents, and it was a cross-license between the two  
06:05 6 companies. So Nvidia received a license to a very large number  
06:05 7 of the Intel patents and Intel, the much larger dominant  
06:05 8 company, had to --

06:05 9       MR. LEE: Your Honor, the last two slides are all material  
06:05 10 that's under seal, has been under seal the entire trial.

06:05 11       MR. CHU: No. That's not so. The MicroUnity situation  
06:05 12 was published in the New York Times.

06:05 13       MR. LEE: I'm talking about the amounts that he's put up  
06:05 14 of these noncomparable licenses.

06:05 15       THE COURT: Let's take the slides down. But you're  
06:06 16 welcome and not -- the jury's heard whatever the numbers are.

06:06 17       MR. CHU: Okay.

06:06 18       Mr. Huston had worked for IBM. And he testified that they  
06:06 19 had this policy. Someone wants a license for one patent, it's  
06:06 20 1 percent. Two patents, it's 2 percent up to 5 percent.

06:06 21       He was asked, "You understand that IBM's 1 percent running  
06:06 22 royalty would result in more damages than Dr. Sullivan is  
06:06 23 proposing, right?"

06:06 24       And he answered "Yes."

06:06 25       There are two patents in this case. He was asked, what if

06:06 1 it was just the 1 percent for one patent, and that gives you  
06:06 2 some idea about the reasonable royalty in this case.

06:07 3 It was a clear admission by him earlier today.

06:07 4 Real-world facts. Intel has made this very large number  
06:07 5 of dollars from infringing the '759 and '373 patents. And this  
06:07 6 is Intel projecting that same technology that is infringing to  
06:07 7 the world at large, trumpeting its importance.

06:07 8 And here, too, is further Intel statements to the public  
06:07 9 about the revolutionary approach that uses the VLSI patented  
06:07 10 technology. And here's more Intel trumpeting this as a key  
06:07 11 feature for the nearly billion in infringing products sold.

06:07 12 You heard testimony from Mr. Spehar about Innography.  
06:07 13 They are an independent company. And they rate the quality of  
06:08 14 patents. Many companies subscribe to this and use it and rely  
06:08 15 upon it, and the two patents in this case score in the top ten  
06:08 16 percentile of patents.

06:08 17 Now, Mr. Spehar was asked about if there were moneys  
06:08 18 generated from this lawsuit, where do the moneys go?

06:08 19 It was brought out on cross-examination. These were not  
06:08 20 questions that we asked, but it was Intel's counsel.

06:08 21 Question: "O you know if anyone else other than NXP  
06:08 22 stands to benefit?

06:08 23 Answer: "Here is like teachers' unions. It's like  
06:08 24 pension funds. Texas A&M has a vested stake too."

06:08 25 I'm going to look at the verdict form and you'll have it

06:09 1 of course in the jury room.

06:09 2 The first question asks about literal infringement of the  
06:09 3 '373 patent. The decision is yours and yours alone. We hope  
06:09 4 you do find that there's infringement of each of the claims.

06:09 5 Question 2 asks about literal infringement of the '759  
06:09 6 patent. And, again, we hope, but it's your decision, that you  
06:09 7 do find infringement.

06:09 8 Question 3 asks only if you answered no to the earlier  
06:09 9 question, you should fill out Question 3 and Doctrine of  
06:09 10 Equivalents. If you've answered there's infringement, then you  
06:09 11 should skip this Question 3 as the instructions state.

06:09 12 Question 4 asks about willful infringement. And you heard  
06:10 13 testimony along the following lines from an Intel engineer that  
06:10 14 they're discouraged from looking at patents.

06:10 15 And the reason why they're discouraged is they want to be  
06:10 16 able to say everything is done independently, but they do read  
06:10 17 articles and publications that may mirror the same technology  
06:10 18 that is described in patents which are publicly available and  
06:10 19 that any engineer or any other person with a few key strokes in  
06:10 20 30 seconds of time can find the relevant patents.

06:10 21 And His Honor provided an instruction that there can be  
06:10 22 willful infringement by willful blindness. So if, for example,  
06:10 23 engineers are told, oh, don't go looking at patents so you can  
06:11 24 say that's what you've been told. You're like an ostrich  
06:11 25 putting your head in the ground, and willful blindness is

06:11 1 sufficient for a finding of willful infringement.

06:11 2 Question 5 has to do with the validity of the '759 patent.

06:11 3 We hope you agree and the evidence supports that the '759

06:11 4 patent is valid and, therefore, this question should be

06:11 5 answered no, in favor of VLSI.

06:11 6 Question 6 asks for damages in connection with the '373

06:11 7 patent. I think you've seen the number during the course of

06:11 8 trial and earlier this afternoon in closing argument. That's

06:11 9 the very specific number you were given earlier.

06:11 10 Question 7 asks about damages for the '759 patent, and,

06:11 11 again, this is a number that you've seen earlier. Now, there's

06:12 12 a question about whether your amount of damages is based on a

06:12 13 running royalty for past sales, and here's a very important

06:12 14 fact that you should know about that not much time was spent

06:12 15 on.

06:12 16 The damages period for this trial ended more than a year

06:12 17 ago. So Intel stopped giving VLSI and its lawyers --

06:12 18 MR. LEE: Your Honor, I object. We didn't stop giving

06:12 19 anything.

06:12 20 THE COURT: Mr. Chu.

06:12 21 MR. CHU: I'm talking about the damages period.

06:12 22 THE COURT: Let's wrap up.

06:12 23 MR. CHU: Sure. Sure.

06:12 24 Here's Question 8. Is the total amount of damages you

06:12 25 found in Questions 6 and 7 a running royalty in the form of a

06:12 1 lump sum for past damages only or a lump sum for all damages?

06:12 2 You did hear testimony that the financial information for  
06:13 3 damages was cut off as of December 31, 2019 and, therefore, we  
06:13 4 suggest that the proper answer is No. 1, a running royalty in  
06:13 5 the form of a lump sum for past damages only as per that date  
06:13 6 that I mentioned as opposed to the second choice.

06:13 7 Now, I want to share a few closing thoughts with you.

06:13 8 You've heard His Honor say that this trial is being  
06:13 9 broadcast. And many, many people who aren't in the courtroom  
06:13 10 because of safety protections are watching every day.

06:13 11 The decision you make is important. It is important for  
06:13 12 the parties in this case, Intel and VLSI. But it's important  
06:14 13 for our innovation economy.

06:14 14 It's important for the encouragement of innovation and new  
06:14 15 inventions. You've heard how long it's taken us to get here,  
06:14 16 and you've heard a lot of evidence about the work that needed  
06:14 17 to be done.

06:14 18 When you go into the jury room, your verdict can send a  
06:14 19 message that companies that use the technology of others  
06:14 20 recognized by the United States Patent Office should entitle  
06:14 21 those patent owners to a reasonable royalty, no more, no less.  
06:14 22 Through that you will be sending a strong signal that you  
06:15 23 support the innovation economy in creating the right incentives  
06:15 24 and set a balance that keeps our economy strong.

06:15 25 You've been absolutely magnificent as jurors. You've

06:15 1 listened to all witnesses and both sides. And for that, I  
06:15 2 thank you very much.

06:15 3 THE COURT: Thank you, Mr. Chu.

06:15 4 Ladies and gentlemen, given the hour, I don't expect for  
06:15 5 you all to begin deliberating tonight.

06:15 6 One of the things we have to do is get the exhibits to  
06:15 7 you. We're in an odd situation because of the pandemic where  
06:15 8 we've done our best to get exhibits formatted so that they are  
06:15 9 electronic. But because we had trial today, there are a number  
06:16 10 of exhibits that came in today that we're not going to be able  
06:16 11 to get into electronic format for you all to have to begin with  
06:16 12 tomorrow.

06:16 13 So you are going to have some of the exhibits, most of the  
06:16 14 exhibits that have come in in the trial in electronic format.  
06:16 15 Others will be in paper format, which is analog digital. It's  
06:16 16 like when I was a lawyer what we just had.

06:16 17 I want to make it clear to you that it doesn't -- in the  
06:16 18 same way, live testimony is the same as testimony you might see  
06:16 19 in a different format. There's no difference in whether you  
06:16 20 should believe or disbelieve anything that is in an exhibit  
06:16 21 just because of the format.

06:16 22 The formatting, we just are saving a day by not taking the  
06:16 23 paper and putting it into, you know, electronic format. So  
06:16 24 with that being said, I have again lied to you. You cannot  
06:17 25 discuss this case amongst yourselves, despite me twice having

06:17 1 said that I wouldn't say that again.

06:17 2 But this is very important. Couple of things. One, let  
06:17 3 me echo what both counsel said, three counsel said, I  
06:17 4 apologize, that you all have been magnificent throughout this  
06:17 5 entire process. There can be no doubt about that.

06:17 6 Second, you have one more evening, at least, where you  
06:17 7 can't look or read or do anything, find out anything about the  
06:17 8 case because you're about to begin to deliberate.

06:17 9 You can't talk about the case, even though it's over. You  
06:17 10 cannot yet begin to talk about the case with each other. You  
06:17 11 cannot begin to talk until you get together tomorrow at 9:00,  
06:17 12 and at 9:00 you will -- the very first thing you have to do is  
06:17 13 what? Pick the foreperson.

06:18 14 And you pick the foreperson. You'll give the note to  
06:18 15 William or to I think whoever's sitting out monitoring you all,  
06:18 16 making sure, sitting outside. You'll give the note. We'll  
06:18 17 say -- I'll tell everyone who the foreperson is, and at that  
06:18 18 point you can begin your deliberations.

06:18 19 And from there on, it's all up to you in terms of timing.  
06:18 20 I very, very, very much appreciate it.

06:18 21 Let me say one more time also, because tomorrow you're  
06:18 22 going to go straight to where you deliberate and I won't see  
06:18 23 you. This -- these lawyers and everyone were as fine as I've  
06:18 24 ever seen since 1984 when I got out of law school.

06:18 25 This was truly the way trials should be conducted. I

06:18 1 compliment all of the attorneys and all of their staff. You've  
06:18 2 seen their staff quietly walking around trying to make sure we  
06:18 3 keep the trains running, but this is -- if every trial were  
06:19 4 like this, I would probably have to work for free.

06:19 5 So it was -- they did a great job. You all have done a  
06:19 6 great job of paying attention. I will dismiss you at this  
06:19 7 point. I look forward to having you back tomorrow morning at  
06:19 8 9:00. Go straight to the other courtroom where you'll be  
06:19 9 deliberating and pick a foreperson and we'll go from there. So  
06:19 10 have a very good evening.

06:19 11 THE BAILIFF: All rise.

06:19 12 (Jury exited the courtroom at 6:19.)

06:19 13 THE COURT: Mr. Lee?

06:20 14 MR. LEE: Your Honor, if I could, principally for the  
06:20 15 record, first, I would ask you to have both parties lodge with  
06:20 16 the Court the demonstratives they used during the closing  
06:20 17 and --

06:20 18 THE COURT: That will be granted.

06:20 19 MR. LEE: I'm going to renew two objections, which I'm  
06:20 20 sure Your Honor is going to overrule, but I think I need to do  
06:20 21 it for the appellate record.

06:20 22 The first is the slides that they used with these  
06:20 23 noncomparable licenses, the 1.5 billion, 300 million, they  
06:20 24 didn't use those as informative. They used those to justify  
06:20 25 their royalty rate. And that is exactly the opposite of what

06:20 1 you're entitled to do. It's the argument we had with Your  
06:20 2 Honor --

06:20 3 THE COURT: Mr. Lee, what do you want me to do?

06:20 4 MR. LEE: I don't think there's anything to do now, but I  
06:20 5 think I have to just renew the objection. And I don't think  
06:20 6 there's anything for you to do now.

06:20 7 THE COURT: Well, you can, but I'm not sure what the point  
06:20 8 of you renewing an objection is now. You objected during  
06:20 9 closing, and I sustained what you said during the closing. And  
06:20 10 I'm -- unless you're inviting -- you're -- you can say whatever  
06:20 11 you'd like, but unless you're asking me to go back and do  
06:21 12 something with the jury --

06:21 13 MR. LEE: No. We're definitely not. But, you know, I've  
06:21 14 seen -- there have been enough occasions where someone has  
06:21 15 said, well, you should have something, you waived it.

06:21 16 And the second just is that slide with Texas A&M, you  
06:21 17 know, Your Honor, Texas A&M is an investor in a Fortress Fund.  
06:21 18 That question wasn't asked directly on cross. It was blurted  
06:21 19 out. And now it's --

06:21 20 THE COURT: Well, I get that, but your person invited it.  
06:21 21 And I think what happened there was -- this is my impression,  
06:21 22 but I'll put on the record since you are. My impression was  
06:21 23 that whoever decided to ask that question got an answer from  
06:21 24 someone who really didn't know what they were saying and  
06:21 25 probably shouldn't have asked that question.

06:21 1 MR. LEE: Your Honor, I actually agree with the first  
06:21 2 part. I don't know if I agree with the second.

06:21 3 THE COURT: I'm saying -- let me say, I would not have  
06:21 4 asked the question if I wasn't sure what the witness was going  
06:21 5 to say. And in that case I think that he was trying to get  
06:21 6 something out of the witness, and he got an answer that was  
06:22 7 unfavorable to Intel, was the way I took it.

06:22 8 MR. LEE: Your Honor, just the second objection to renew  
06:22 9 is allowing that argument to occur in closing when we weren't  
06:22 10 allowed to explore Fortress, which owns the fund that Texas A&M  
06:22 11 invests in. That's the second objection.

06:22 12 THE COURT: But I didn't allow that. I mean, Mr. Chu said  
06:22 13 it. If you had objected, I would have -- in fact, I turned my  
06:22 14 head to see. I've got to learn to stop. I have this habit of,  
06:22 15 when I think something is objectionable, I instinctively turn  
06:22 16 my head to see if someone's going to stand up. And I actually  
06:22 17 thought that there might be an objection at that point. And  
06:22 18 had there been one, I would have done something about it at  
06:22 19 that time.

06:22 20 MR. LEE: Well, I didn't object because, as Your Honor  
06:22 21 told us earlier, if it was in the record, it's in the record.

06:22 22 THE COURT: Well, but I understand.

06:22 23 MR. LEE: I think I've done all that I have to do now.  
06:22 24 And as Your Honor says, we're not asking you to do anything at  
06:22 25 this moment. We may at some point.

06:22 1 THE COURT: I understand. And -- but, Mr. Lee, and let me  
06:22 2 put on the record, thank you. And you are free to -- I know  
06:23 3 you've got to skedaddle, so I know you won't be here tomorrow.

06:23 4 MR. LEE: No. Thank you, Your Honor. Thank you for two  
06:23 5 things. One is thank you for getting me off to this other  
06:23 6 hearing and accommodating that. And thank you for all the  
06:23 7 courtesies to everybody for the last week.

06:23 8 As I said to Suzanne and Kristie, everybody's been as  
06:23 9 hospitable as they could be, and we may even come back in  
06:23 10 April.

06:23 11 (Laughter.)

06:23 12 THE COURT: I understand.

06:23 13 Yes, sir, Mr. Chu.

06:23 14 MR. CHU: Two things. In some jurisdictions, even when  
06:23 15 lawyers have objected to jury instructions before they were  
06:23 16 read, as was done here, in some jurisdictions the practice is  
06:23 17 to object after the reading, so I just want the record to be  
06:23 18 clear that we renew the objections that we had already put on  
06:23 19 the record with respect to jury instructions.

06:23 20 And second, of course, we also thank not only Your Honor,  
06:23 21 but all of your staff who are in the courtroom and everyone in  
06:24 22 the courthouse, from the security people and others. They've  
06:24 23 been very accommodating to our entire staffs, on both sides, to  
06:24 24 allow us to make things happen when the courthouse was closed  
06:24 25 so we can move documents in here, get things wired up, and I've

06:24 1 got some magnificent restaurant recommendations for barbecue  
06:24 2 and other things, particularly from some of the security  
06:24 3 officers, and I look forward to trying those restaurants.

06:24 4 THE COURT: Well, let me wrap up by saying this, and I've  
06:24 5 said this a couple times: I could not have hoped -- when I  
06:24 6 came into this, I could not have told you all how well I  
06:24 7 thought you all would do. I thought this would be exceptional  
06:24 8 at every level. And yet you all exceeded what I had  
06:25 9 anticipated happening. Whether it was on opening or closing  
06:25 10 or -- you noticed I did not stop you all from talking, even  
06:25 11 though you both abused me by going too long. That was -- I  
06:25 12 just decided I wasn't going to say anything. Don't think I  
06:25 13 didn't know it.

06:25 14 But I just wanted you -- and -- but the lawyers were  
06:25 15 exceptional in terms of their examinations, in terms of  
06:25 16 presenting issues to me. You all made it, I've told people,  
06:25 17 very difficult but in a very good way because the issues you  
06:25 18 presented often were tough issues. But you did such a great  
06:25 19 job on both sides arguing them, that's what made it tough. Not  
06:25 20 the normal toughness where sometimes lawyers don't really know  
06:25 21 what they're doing and that's a different thing to deal with.

06:25 22 So I very much appreciate everything that has happened  
06:25 23 over the past six days. And I know we've got more time  
06:26 24 together coming in a couple months. I'm in many ways happier  
06:26 25 about that probably than some of you all are. But I look

06:26 1 forward to seeing you.

06:26 2 Again, Mr. Lee, Godspeed to you, wherever it is you're  
06:26 3 headed.

06:26 4 MR. LEE: Thank you, Your Honor.

06:26 5 THE COURT: And, Mr. Chu, if you are staying here through  
06:26 6 the -- for the jury verdict, I won't say adieu to you yet. We  
06:26 7 will be here tomorrow at 9:00 -- actually, I'm sorry. I need  
06:26 8 you all here at 8:30, right? I need at least one or two of you  
06:26 9 here at 8:30 to resolve exhibit issues so we can make sure that  
06:26 10 by 9:00 the jurors have all the exhibits.

06:26 11 So I -- we'll take that up at 8:30 tomorrow. Not everyone  
06:26 12 has to be here, but someone needs to be here for each side.  
06:26 13 We'll get the exhibit issues resolved. The jury will have it  
06:26 14 at 9:00. I need again at least a couple of people here shortly  
06:27 15 after 9:00 because I'll tell you all who the foreperson is.

06:27 16 And then what I really need from that time on is  
06:27 17 someone -- a person from each side so that when -- if we get a  
06:27 18 note we can quickly assemble and I can quickly tell you all --  
06:27 19 I'll ask you what you'd like me to do, and then I can get a  
06:27 20 response to the jury as quickly as possible. So at least a  
06:27 21 couple of people will need to be available to help me with the  
06:27 22 notes.

06:27 23 Again, have a good evening. It was a tremendous trial.  
06:27 24 Everyone should be proud of what they did, and I will see you  
06:27 25 tomorrow morning.

06:27 1 THE BAILIFF: All rise.

06:27 2 (Hearing adjourned at 6:27 p.m.)

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1 UNITED STATES DISTRICT COURT )

2 WESTERN DISTRICT OF TEXAS )

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4 I, Kristie M. Davis, Official Court Reporter for the  
5 United States District Court, Western District of Texas, do  
6 certify that the foregoing is a correct transcript from the  
7 record of proceedings in the above-entitled matter.

8 I certify that the transcript fees and format comply with  
9 those prescribed by the Court and Judicial Conference of the  
10 United States.

11 Certified to by me this 8th day of March 2021.

12

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